INSPIRE XXVI

Delivering Global Education and Impact in Emergencies Using E-Learning

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ISBN 978-1-9996549-5-5
British Cataloguing in Publication Data.
A CIP catalogue record for this e-book is available at the British Library.

Twenty Sixth International Conference
on

Delivering Global Education and Impact in Emergencies Using E-Learning

INSPIRE 2021

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This volume contains the edited proceedings of papers from the twenty sixth International Conference on Software Process Improvement Research, Education and Training, INSPIRE 2021 held remotely, organised by Solent University and the e-Learning Specialist Group of the BCS, The Chartered Institute for IT.

The objective of this conference is to promote international co-operation among those concerned with e-learning by creating a greater understanding of e-learning issues, and by sharing current research and case studies through academic and industrial experience.

The conference organisers feel that this objective has been achieved. INSPIRE 2021 has attracted papers from international sources, covering a broad spectrum of practical experience and research. The topic areas include the use of e-Learning and tools for schools, HE and the wider public, augmented reality, social media, programming in schools, gamification, cyber security in teaching and learning, case studies in use of e-learning in 2021 in various countries, including Armenia, Bangladesh, Bosnia-Herzegovina, China, Cyprus, Denmark, Egypt, Finland, Greece, Ireland, Kazakhstan, Kenya, Northern Ireland, Romania, Russian Federation, Spain, Turkey, UK, and the USA.

We would like to thank the many people who have brought this twenty sixth international conference into being: the Organising Committee, the International Advisory Committee, particularly for all their hard work in reviewing both the abstracts and the final papers, and the committee members of the BCS's e-Learning Specialist Group.

The organisers would like to thank the BCS and Solent University for their support.

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Impact of the *COVID*-19 Pandemic on Education: Experiences and Feelings Reported by Primary School Pupils from Greece and Turkey

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Abstract

COVID-19 pandemic had a huge impact upon life and the educational experience of students. One of the groups mostly affected from this global pandemic is the primary school children. The sudden transition to distance education from traditional face-to-face education undoubtedly changed the implementation methods of the teaching programmes in schools. The research study reported in this paper was carried out in Greece and Turkey. Responses were collected from primary school pupils who voluntarily and anonymously completed an online questionnaire with multiple choice questions. The latter were carefully worded in an appropriate

and understandable way, using language suitable for primary school age children. Comparisons between the responses from the two countries revealed similarities and differences. Through a comparative approach the research results are particularly scrutinised through the lenses of equal opportunities and social inclusion policies along with a cross-cultural perspective, which is expected to have a useful impact during the post-pandemic era. By sharing the collective knowledge and experience gained, we aspire to propose educational strategies for well-being and recovery, and overall educational process improvement.

Keywords: *COVID-19* pandemic primary education, socio-digital inclusion, online questionnaire, online learning, cross-cultural study

1. Introduction - Primary Education and *COVID* -19 Across the World

The sudden and quick outbreak of the Coronavirus (*COVID*-19) pandemic resulted in unprecedented loss of life and in major disruption of all aspects of human activity. The thread to life and livelihood continues to challenge humanity. Education was no exception. The rapid transition from traditional face-to-face learning to remote (online, by post, and other) learning was proved to be a great challenge for schools, school teachers, pupils and their families. It also directly challenges, above all, the educational, socio-technical and knowledge infrastructures which, in turn, influence the well-being of the individuals in the information society. A whole year has already gone by and still a large number of schools across the world remain closed or are closing intermittently. According to data released by UNESCO in 2020, over 800 million pupils, a percentage which corresponds to half of the world's pupil population, continue to face major disruption in their education and lives [1].

A number of researchers carried out country or sector specific studies and it has been reported that pre-existing inequalities, such as the digital divide, were exacerbated and continue so at the present rate [2, 3] . Lack of or poor preparedness coupled with the required speed of implementing the transition are the two factors responsible for the varying degrees of success. Vulnerable and disadvantaged communities suffered more severe problems both in terms of disproportionate high loss of life and loss of learning opportunities [4]. Additionally, many of the published research papers refer to actions and opinions of senior decision makers, ignoring the voices of other interested groups and learners of primary education in particular.

The study reported in this paper was initially carried out in Greece, Cyprus and Turkey. Responses were collected from primary school pupils who voluntarily and anonymously completed an online questionnaire with multiple choice questions. The questions were carefully worded in an appropriate and understandable way using language suitable for the primary school age children, thus customised to the socio-cognitive and socio-technical skills and learning needs of children at the age of 6-12. The pupils were invited to describe the problems related to their studying and learning, their communication with their fellow pupils, and with their teachers. They were also asked to express their feelings, experiences and opinions. Through this part of the questionnaire, the state of the pupils' well-being could be ascertained. Finally, the answers from the four (4) Cypriot participants were not included in the sample examined herein because the disparity in numbers of responses would render any comparison unrealistic and statistically inaccurate.

We particularly aimed at identifying educational practices and prevailing pedagogic and socio-technical problems in order to draw comparisons among the participating countries, genders and socio-economic strata including pupils' digital literacy, and the availability and secure access of digital technologies. Attention was paid to parent/guardian employment status before and during the pandemic, and to parents'/guardians' ability (e.g. financial, educational, socio-digital and other) to support and safely guide their children while on remote and/or online learning. Further, the research study, based on pupils' experiences, aimed at exposing the advantages and disadvantages and security dangers of online learning [4, 5]. Comparisons between the two countries revealed commonalities and differences that are discussed in a later section.

Based on the comparative analysis of the results, the authors discuss equal opportunities and social inclusion policies. By sharing the collective knowledge and experience gained, we aspire to propose strategies for recovery that can benefit the overall educational process improvement efforts.

The rest of the paper presents a brief literature review (section 2), followed by section 3 which discusses the socio-economic and digital inequalities in general, and their impact on primary education in particular at these challenging times of the pandemic. The research questions and the questionnaire structure are shown in Section 4. The results and their interpretation follow in Section 5. Section 6 presents the identified similarities and differences, and section 7 contains suggestions for recovery and overall learning and teaching process improvement.

2. Related research

2.1 Education of primary school teachers in Greece.

The education of primary school teachers in Greece, focuses on familiarizing future primary school teachers with skills related to Information and

Communication Technologies (ICTs), digital technologies and applications they can use in teaching and learning according to Tzifopoulos [7-8].

2.1.1 University pedagogic departments of Primary Education

Tzifopoulos [7] investigated the curricula of the nine pedagogic departments at Greek universities that prepare teachers (preschool teachers, primary school teachers and philologists) in Greece, and described the modules offered and related to Information and Communication Technologies (ICTs) and digital tools. Seven of the nine university pedagogic departments that offer primary school education in Greece offer from 4 to 10 ICT modules to primary school teacher candidates. In total, of the 84 modules offered, concerning computers and ICTs, twelve (16.7%) are compulsory and 8 modules combine theoretical and laboratory approaches. Two are totally theoretical modules and one module has a laboratory character. Teacher candidates can acquire more specialised knowledge and enhance their technical and pedagogical skills with the contribution of digital technology, such as Programming Languages, WebQuests, Digital Games, Digital Comics, Virtual Learning Environments, Wikis, Blogs, Websites, STEM Applications, Video Editing, Google Apps and other [7-8].

2.1.2 University Schools of preschool teachers, primary school teachers and philologists

Tzifopoulos investigated the curricula of other University Schools that prepare teachers (preschool teachers, primary school teachers and philologists) in Greece, and described the modules offered and related to Information ICTs and digital tools [7-8]. He identified both theoretical and practical modules, as well as modules related to distance education contact (Tzifopoulos & Bikos, 2016). However, of the 44 modules devoted to ICTs only one third of them are compulsory. Seven of the compulsory modules (half of them) are Computer Science modules. Three (3) modules were identified to include theoretical orientation for technology (theories for educational technology and ICT learning). The other modules (4) identified were laboratory modules linking theory to practice. The remaining 30 optional modules, included four in Computer Science, seven (7) related to theoretical issues for technology and the remaining 19 modules were characterised as "*application modules*". Also, two modules compatible with teaching with modern educational platforms entitled "*Design, implementation and evaluation of actions and materials of modern and asynchronous distance learning*", "*Online tools*" were identified.

Tertiary education institutions preparing teachers for primary education: A small number of compulsory ICT modules (12) and a disproportionately larger number of elective specialised modules (72) were identified. The elective modules aim to help deepen concepts and applications, useful for the educational process.

Learners, in general, seem to be quite familiar with the use of ICTs and technology, but they are integrated into their own everyday practices, such as entertainment (YouTube), communication (social networking, such as by the use of Instagram,

Facebook, Messenger) digital games (such as Roblox). Parents consider this activity to be natural, but not so natural in the school environment [10, 11, 12] .

Attempts are also made by the government to support e-learning in the pandemic by providing (a) synchronous form of learning, with digital libraries and websites, such as Photodentro (http://photodentro.edu.gr/lor/), digital school (https://dschool.edu.gr/), digital platform "e-me" (https://auth.e-me.edu.gr/), platform "Aesop" (http://aesop.iep.edu.gr/), video lessons from the Hellenic Radio Television (ERT) (https://webtv.ert.gr/category/mathainoume-sto-spiti/), involving pupils in this process and with adequate preparation of teachers to "upload" material to the platforms and accept the assignments of their learners [8].

Also a form of flipped classroom, where learners read, research, and consult digital material through platforms outside the school context and as assignment discuss the relevant theory and what they undertook at home in order to develop it and reflect further slowly also starts to be used. This is achieved through strategies for problem-solving, collaboration and interaction among learners and between learners with their teacher.

Tzifopoulos [8] asserts that the more positive the epistemological assumptions of the teacher about the modern form of learning are, the more receptive they seem to be to harnessing technology with didactic and pedagogical targeting.

2.2 Support by the Hellenic Ministry to teachers and learners during the pandemic

Attempts were made by the Hellenic Ministry immediately establishing a help desk for advice, support and solving problems. The lack of digital equipment was addressed at a later stage with donation of equipment, such as tablets and laptops, that reached schools across Greece to enable the distant learning process. The telecommunication services provided free of charge access to national platforms and software used for teaching and accessibility to all learners and teachers [13]. Furthermore, the Ministry set up a website (https://mathainoumestospiti.gov.gr/) to provide the teaching and learning community with useful and innovative distance learning tools and ideas.

In the framework of Action [13]: Staying at home with eTwinning the Hellenic National, the Support Service (EYY) of eTwinning created three online seminars and webinars:

1. Distant learning – Communication tools – Cooperation tools – Advice https://seminars.etwinning.gr/course/view.php?id=4221,
2. Educational Communities & Blogs in the Panhellenic School Network (blogs.sch.gr) https://seminars.etwinning.gr/course/view.php?id=4222,
3. Electronic school class PSN (eclass.sch.gr) https://seminars.etwinning.gr/course/view.php?id=4223.

The eTwinning also promoted a webinar on “Practical tools for developing well-being and cohesion in classroom groups during *COVID*-19 time” and approved

twelve new works on *COVID*-19 for the implementation of which, 372 teachers of primary and secondary education collaborated from all around Europe. In total 382 new teachers and 214 new school units registered on the platform of eTwinning from March 2020. It also created ten semi-yearly webinars (of 120 hours each) https://seminars.etwinning.gr. On an international level the Hellenic eTwinning Support Service (EYY) participates and organizes the following actions:

1. In- school eTwinning collaborative projects through TwinSpace platform and other digital tools shared by the pupils and teachers participating in the projects
2. New Groups "eTwinning at Home, eTwinning in times of school closure"
3. Monthly learning events and webinars, such as:
    - Learning Event 2020: How to launch an eTwinning VET project from zero?
    - How to implement projects into lessons, and lessons into project,
    - The School Education Gateway School Education Gateway.

The Ministry of Education is planning to develop a crash-course training programme (15 hours) for all teachers of the public sector in digital skills and distance learning.

3.Education of Primary School Teachers in Turkey

Training teachers is one of the key topics in the Turkish Educational System. Education has three significant pillars, namely student, teacher and programme. Integrity and success of an educational system is based upon this. Teachers in education goes in parallel with the political, socio-economic and cultural developments. During the process of transition to the Turkish Republic Period, education of teachers was a central issue, as well. In 1923, there were 10102 primary school teachers, 1081 of them female and 9021 of them male. Also, 378 of the teachers who had vocational education were female and 2356 of them were male. Out of the remaining 7368 teachers 1357 had secondary school education, 152 of them did not have regular education [14]. Turkey underwent different teacher training programmes. In the Republic Period, legal efforts were made to enable the teaching activity as a legal occupation. The educational period of teachers studies were extended to six years in 1932-1933. It was composed of two sections. The first three years was called as the first educational period, and the following three years were called the second educational period. After a period of time, this implementation was removed. Training village teachers came to the fore in 1937. Two educational institution, one in Eskişehir and the other one in İzmir, were opened. This implementation began to be the starting period of the publication of Law 4274 regarding the village institutes (a kind of teaching institution for training teachers) and enactment of 3238 named "Village educational courses" and "Village Teacher School". Between 1924-1938 professional courses for teaching were prioritised. In different parts of the country, till 1948, 21 village institutes were established and high village institute, providing three-year higher education was established. Till 1953, the policy of training two types of primary school teachers was sustained. After this, with law 6234,

institutions training teachers were combined under the title of " Primary School Teacher ". In 1974, two year education institutes started to be opened. In 1976, 30 of the 50 institutions were closed. Since the 20th of July 1982, they were turned into vocational high schools and were included within the frame of universities [15]. As of 1989, teaching period of high schools were prolonged to 4 years and they got transformed into educational faculties. Today in universities, in educational faculties, teachers were trained in the four-year departments. They study subjects such as Educational philosophy, Information Technologies, Fundamentals of Early Childhood, Child Health and First Aid Kit, Early Childhood Program, Teaching Technologies, Performance Measurement and Evaluation, ICT Technologies, Teaching Design, Games in Early School Development Period, Turkish Educational System and School Management, Art Education in Early Childhood, Training of Social Values.

3.1.Distance Education in Turkey During *COVID* 19

Primary education was both provided in distance education teaching platforms and TRT EBA TV channel. The courses were repeated three times. In EBA there exist approximately 40,000 rich, reliable and interactive content. There are videos, interactive content, summaries, infographics, project documents, contents special for teachers. Also there were books (more than 5000) and there were questions more than 240,000 [16]. Besides this, students joined the courses offered by their schools. For some children who have limited access to the Internet and laptops, smart phones, support was provided by the state. In some classes, online exams were made. In other classes, assignments were given to the students.

4.Socio-economic and Digital Literacy Inequalities

4.1 The Pre-existing Digital Divide

Learners from different cultural and economic backgrounds have given rise to digital inequalities related to the level of availability of digital infrastructure at home and the education levels of their parents, who may lack digital skills themselves [17] This concerns the different degree of familiarity and engagement with the digital tools of learners of the same age group. Digital divide also refers to the gap between demographics and regions that have access to Information and Communication Technologies (ICTs). The digital divide is heavily interwoven with the issue of education and poverty [18].

Long before the pandemic ICT literacy has been viewed as a set of user skills that enable active participation in a society where services and cultural offerings are computer-supported and distributed on the Internet. Technological literacy (formerly referred to as computer literacy) entails a deeper understanding of digital technology and comprises both user and technical computing skills. At the same time a growing gap between certain countries and sections of society even within advanced economies considerable levels of illiteracy as well as digital literacy kept

growing [19, 20]. Karpati [21] identified (i) effective selection and application of ICT systems and devices, (ii) utilisation of common generic software tools in private life, (ii) use of specialised tools for work; and (iv) flexible adaptation to changes in infrastructure and applications, as core skills in order to become ICT user literate.

In addition to pre-existing efforts towards bridging the digital divide, the crisis caused by the *COVID*-19 pandemic meant that teachers and parents had to switch to Emergency Remote Teaching [22].The lack of preparedness by governments has its root in political and economic ideologies and policies which result in an increase in inequalities in advance economies but primarily in countries struggling under immense national debt.

In the UK, one of the seven richest economies in the world, many primary school children from deprived backgrounds found themselves lagging behind due to cramped living conditions, with limited facilities they had to share with siblings, often with parents out of work. They had to be supplied with digital equipment by the school, the municipality, or by charities. Andrew et al. [23] in their extensive study found that *"there is a real risk that time spent learning at home since schools closed in March 2020 has widened educational inequalities between poorer and richer students, especially among primary school students. If the pandemic forces schools to close again, it will continue particularly to deprive poorer students of the protective and (at least partly) equalising role that time in school can play for their learning and development".*

As Tumwesige [24] emphasises *"the digital divide in Uganda highlights the enormous inequality gap The difficulty of accessing learning technologies and level of digital literacy skills between privileged and the deprived groups continues to widen the education gap. For the vast majority of learners living in rural Uganda, online learning is but a dream within a dream."*

UNICEF Office of Research – Innocenti [25] reported in March 2021that *"COVID-19 has negatively affected social spending in indebted countries, in sectors including education, child protection, nutrition, and water, sanitation and hygiene……this identifies priority countries with high levels of child poverty, where budget expenditure on key social sectors may be threatened if debt levels continue to rise".*

Countries that are plagued by poverty and deprivation spent a higher proportion of total government expenditure on debt service in 2019 than they did on education, health and social protection combined. The socio-digital divide is a consequence of the socioeconomic divide and anti-social policies of the local governments and international bodies and organisations.

Azubuike et al. [3], for example, studied remote learning in Nigeria during the COVID-19 pandemic by using a quantitative study including 557 pupils and 626

parents living in Nigeria. The results showed significant differences in access to remote learning opportunities during the pandemic by pupils. They also found significant differences in access to digital tools between pupils in government schools and private schools as well as a statistically significant relationship between parental level of education and the ability to support learners in their remote learning during the pandemic.

4.2 Rapid Digital Skills Acquisition by Teachers. The Role of Parents

Rapid digitalization, over the past decades, has transformed many aspects of work and daily life. The education and training system is increasingly part of the digital transformation and can take advantage of its benefits and opportunities. However, it must also effectively manage the risks, including the risk of the urban / rural digital divide where some people can benefit more than others. This transformation in education during the COVID-19 era is influenced by advances in connectivity, the widespread use of devices and digital applications, the need for individual flexibility and the growing demand for digital skills. The COVID-19 crisis has significantly accelerated this change [26].

The question that arises is what the role of teachers and parents is in this new online learning experience. Undoubtedly, the COVID-19 crisis has for the first time put teachers, students and parents in a situation where there were not many options but to use digital technologies to provide education and training. Many educators and students faced a steep learning curve as their digital skills had to be updated at a rapid pace. In this unprecedented use of technology for learning, teachers had to organize their teaching differently and interact with students on a more personalized basis, focusing on their specific needs.

Based on this knowledge, efforts should be made by governments and school principals to support teachers to effectively integrate online tools into their teaching practices, e.g. encouraging the pedagogies of teachers that aim to provide guidance and motivation to students for active learning [27]. In addition, it should be ensured that the use of digital technologies and online tools corresponds to the needs of students, their previous skills and their digital education. In fact, it is argued that the role of the teacher in the integration of digital technology in education is crucial, as when it is done skillfully, equitably and effectively by teachers, it can fully support the agenda of high quality and inclusive education and training for all students. It can also facilitate more personalized, flexible and student-centered learning, in all phases and stages of education, as technology can be a powerful and engaging tool for collaborative and creative learning [28].

The role of parents in the online learning experience is also emphasised, especially in the development of strong attitudes towards learning that can help students overcome some of the potential challenges posed by online learning, such as staying focused during online lessons or maintain adequate motivation. These data suggest that parents can play a critical role in homeschooling, such as ensuring that their children follow the curriculum and supporting their children emotionally to maintain their motivation and ambitious goals in a situation where they can easily

be discouraged. However, many obstacles can hinder effective parental engagement; for example, they may find it difficult to engage their children in school work while combining work or other family responsibilities. The feeling also that they themselves are not able to support their children due to lack of digital skills or familiarity with the content of school work can make it difficult for them to be actively involved [29].

4.3 The Effects of the Environment at all Layers on the Children

The many layers of the child's world (as shown in Figure 1) exert an influence and provide opportunities or the lack of opportunity to the child.

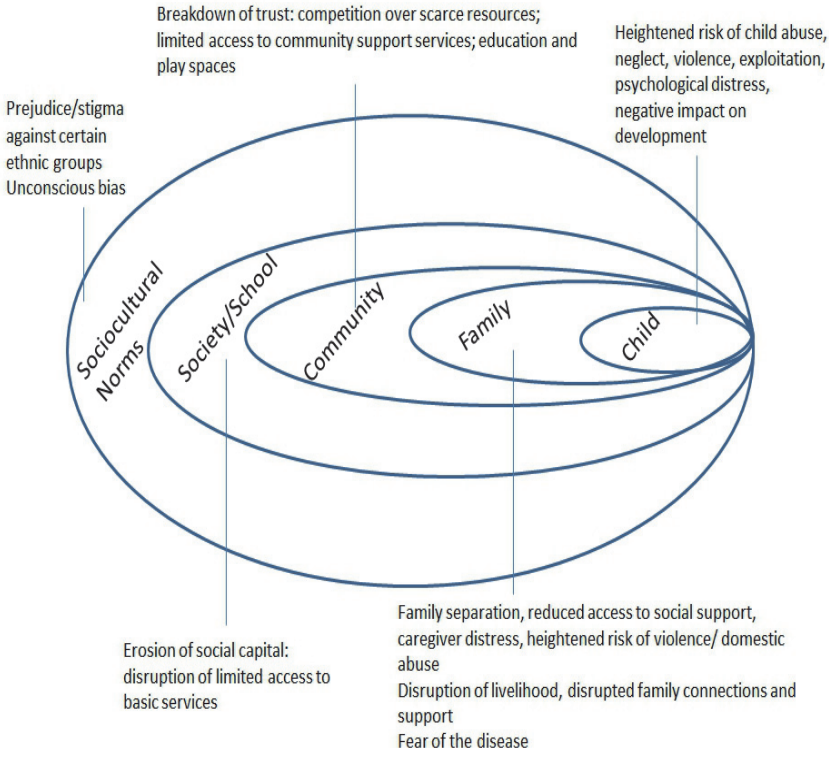

Figure 1**:** Socio-ecological impact of COVID-19 (adapted from Putri et al [30]).

Figure 1 depicts the relations between the family, the community, the society/school and the sociocultural norms. The sociocultural norms are the cornerstones for values, which are learnt implicitly since childhood and remain unconscious to those who hold them. Psychologists believe that most children have their basic value system in place by the age of 10 [6]. Values are qualities, principles or behaviours that generate tendencies to prefer certain states of affairs over others [5, 31]. The societal norms influence the whole society and how the education system works. Hence, it influences the community, the family and the child, its opportunities or lack of opportunities.

5. Research Design

The context of the research is the global crisis created by the COVID-19 pandemic and the effects on primary education, the learning and well-being of primary school pupils, teachers and their families.

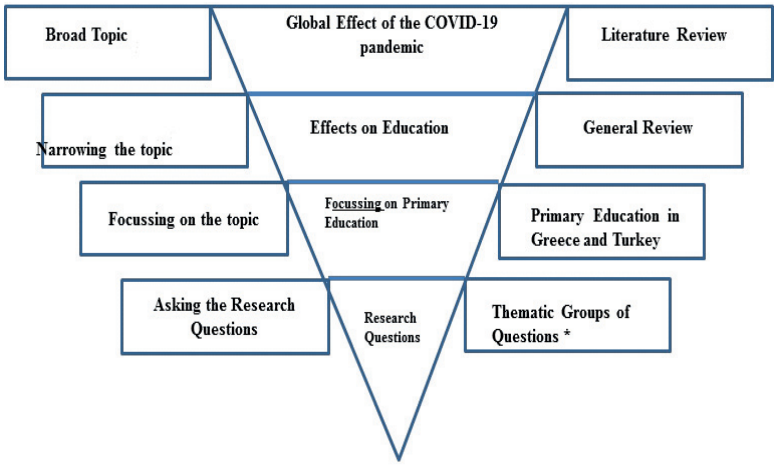

Figure 2 – Research Context and Stages

This qualitative research was based on the ethical principles of voluntariness, anonymity, and non-traceability. It consisted of a review of relevant literature, initially providing a global perspective, and subsequently focusing on the effects of the pandemic on education in general and on primary education in particular. Initially several countries were involved, however due to lack of response the research concentrated on responses from Greece and Turkey.

The survey method was selected for capturing primary data from various countries using the instrument of an online questionnaire, which primary school children were invited by their teachers, their parents and other members of their family to complete. There was an inherent risk to receiving low responses as children were already adjusting to studying from home. The imposition of having to complete the questionnaire might have proved difficult.

The Research Questions were worded in a terminology which is understandable to children of 6-12 years of age covered 6 areas:

- Demographics: age, gender, country, year/grade at school, employment category and status of parents/guardians before and during the pandemic.
    - Availability and access to facilities (internet, desktops, laptops, smart phones)
    - Ability of parents to support home learning
    - Learning – communication with teachers, friends/classmates , support, concentration
    - What they liked best about online learning#
    - What they hated the most about online learning.

6.Research Results and Interpretation

6.1 Demographics

6.1.1 Gender

In total 34 pupils from Greece and 30 pupils from Turkey answered the questionnaire. The gender distribution included 15 girls and 15 boys from Turkey, as well as 16 boys and 18 girls from Greece.

6.1.2 Age

According to the collected data from Greece, there are 16 pupils at the age of 7 and 17 pupils at the age of 8 as the highest age. There is only 1 pupil at the age of 5 and only 1 pupil at the age of 12 as the lowest numbers. As for Turkey, there are 2 pupils at the age of 7, 11 pupils at the age of 8, 4 pupils at the age of 9 and 13 pupils are at the age of 10.

6.1.3. Distribution of the pupils - Pupil according to the study year

A total of 34 Greek pupils responded: 17 pupils were in the 1st class, 22 pupils were in the 2nd class and 19 pupils were in the 4th class. Only 1 pupil is in the 6th, 9th and 12th year of study..

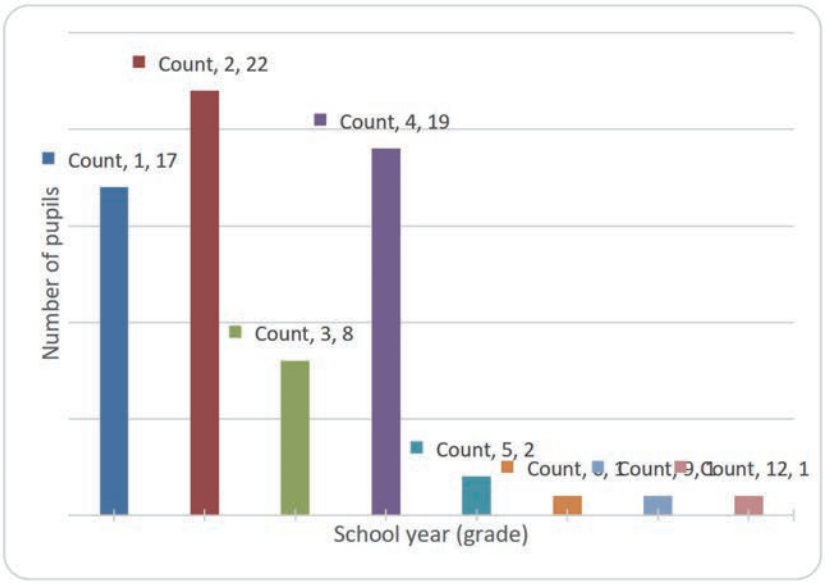

Figure 3: Distribution of the Greek pupils according to the study year

In the Turkish group (30 pupils), there were 13 pupils in the 4th class, followed by the 11 in the 2nd class, 4 pupils in the 3rd class and 2 pupils in the 1st class.

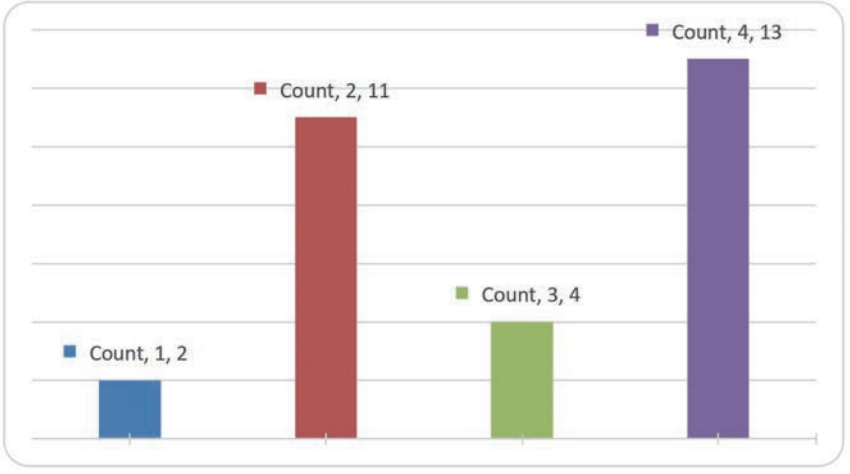

Figure 4: Distribution of the Turkish pupils according to the study year

6.1.4 Employment Status of the Parents/Guardians before the Pandemic

The pupils were asked if any of their parents/guardians were unemployed before the pandemic or not. 3 of the total number of pupils in Greece said that both of their parents are not employed during the pandemic. These results give an idea about the economic conditions of the pupils' families, and generally it seems their families were employed and had certain economic means to support their educational activities. Twenty nine (29) of the Turkish participants reported that their parents, including both mother and father, were employed before the pandemic.

6.1.5 Employment Status of the Parents/Guardians during the Pandemic

In Greece, all respondents confirmed that none of their parents/guardians became unemployed DURING the pandemic for Parent/Guardian 2, and, except for 1, for Parent/Guardian 1. These results confirm that the employment status of pupils' families did not change much during the pandemic, resulting in stable economic conditions. In Turkey, all respondents said no for Parent /Guardian 2. Whereas 3 of respondents stated that their parents did not get unemployed during the pandemic. The respondents of the survey from Ankara, which indicated the stable economic conditions in Ankara, as well. Comparing and contrasting both countries's data, one can see that the situation from Ankara and Thessaloniki seemed almost the same during the pandemic.

6.1.6 Working from home during the lockdown

One of the Parent/Guardian of totally 16 pupils and the other Parent/Guardian of 19 pupils in Greece, were working from home DURING the lockdown. These results generally match with the pandemic conditions that result in more intensive experience of work from home, distance work and distance education have become the inevitable reality of the lock down (See Figure 5 and Figure 6)

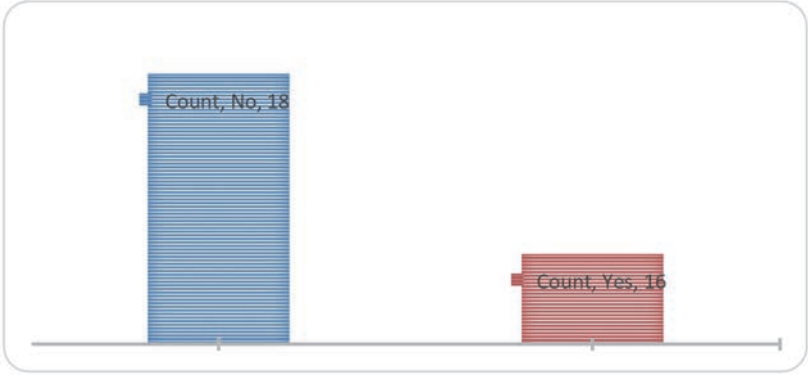

Figure 5: Distribution of the first parent/guardian who worked from home during the pandemic in Greece.

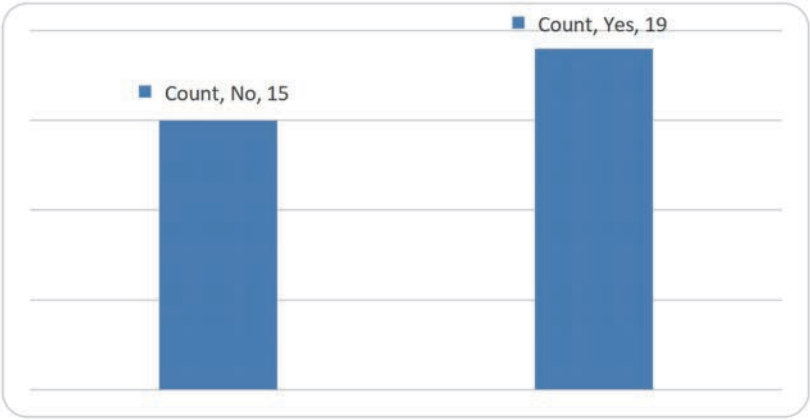

Figure 6: Distribution of the second parent/guardian who worked from home during the pandemic in Greece.

When the situation in Turkey was examined for the distribution of the parent/guardian one, 23 pupils reported that their parent/guardian one was working from distance during the pandemic (see Figure 7) and 24 respondents also provided the same information for the second parent/guardian. When compared to Greece, the number of parents who were working from home during lock down was considerably lower in Turkey as we can see from figures 5, 6, 7 and 8.

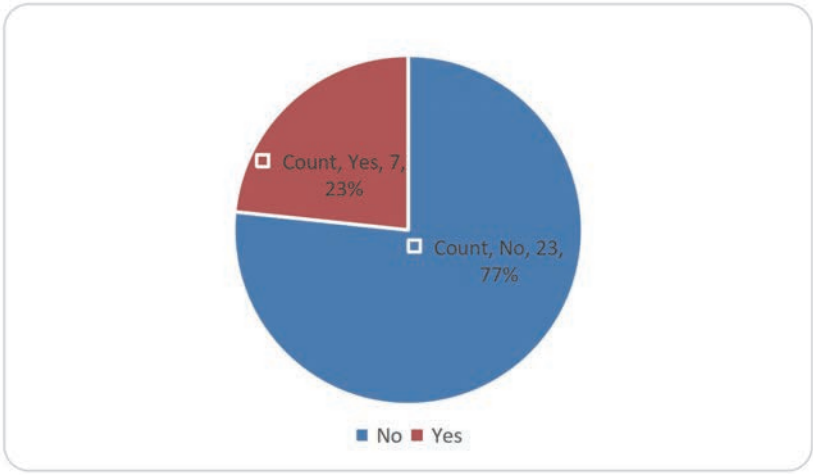

Figure 7: Distribution of the parent/guardian one who worked from home during the pandemic in Turkey.

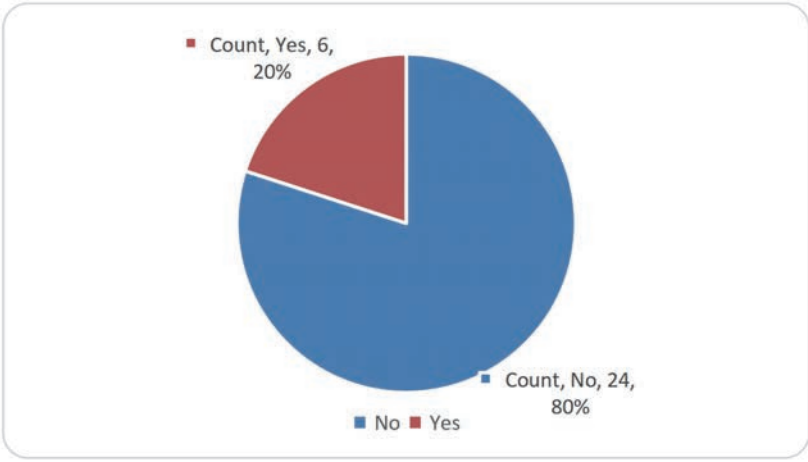

Figure 8: Distribution of the parent /guardian two who worked from home during the pandemic in Turkey.

6.1.7 Number of Siblings in Greece

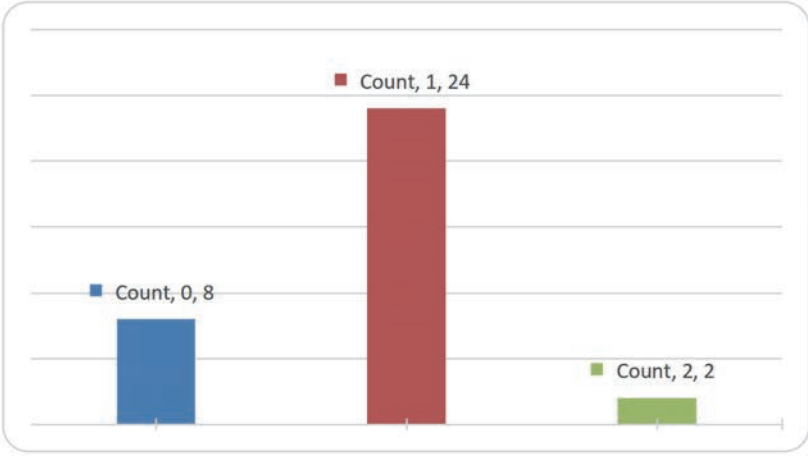

Figure 9**:** Number of Siblings in Greece

In Greece, 8 pupils have none, 24 pupils have one, and 2 pupils have two siblings. No answers were recorded for siblings equal to or more than 3.

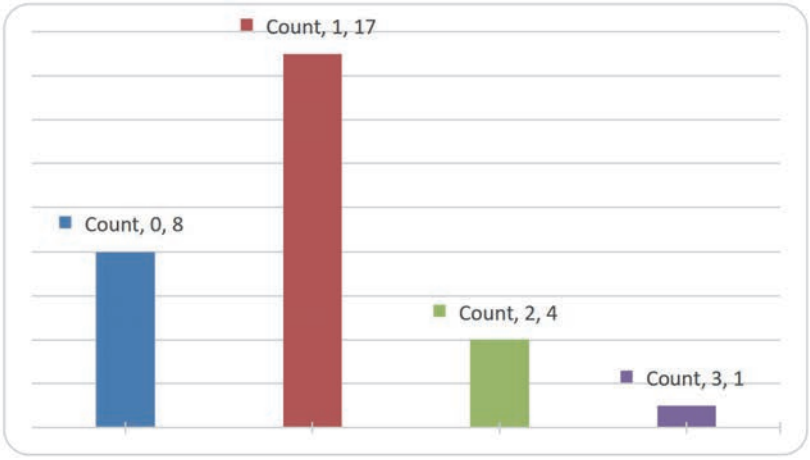

Figure 10: Number of Siblings in Turkey

When analysing the number of the siblings of the respondents from Turkey, it is seen that 8 of the pupils have no siblings. The majority (17) of the pupils reported to have one sibling; where as 4 pupils reported to have two siblings. This is followed by the number of participants (n=1) who stated to have three siblings. In Greece and Turkey, the majority of the pupils have one sibling, which indicate that respondents are not coming from crowded families and may not need to share the equipment with their siblings.

6.1.8 Internet status at home before the pandemic

All of the pupils from Greece have Internet access before the pandemic. This is an important data in terms of satisfying the minimum requirements of accessing to distance education. However the situation in Turkey is a bit different. Only 18 of the respondents reported to have access to Internet before the pandemic. Greece is seen to be in better position in terms of Internet access before the pandemic.

6.1.9 Tools Used for Online Classes

For online classes Microsoft Teams and Webex were equally used in Greece (16 pupils each). Zoom was used by 2 pupils. Google Classroom, or other tools w not used by any of the Greek pupils according to the results (See Figure 10.)

Figure 11: Tools reported to be used by the Greek Respondents

In Turkey, Zoom was the most used platform. Only 1 pupil reported that Google Classroom was used and 8 pupils responded for the other option.

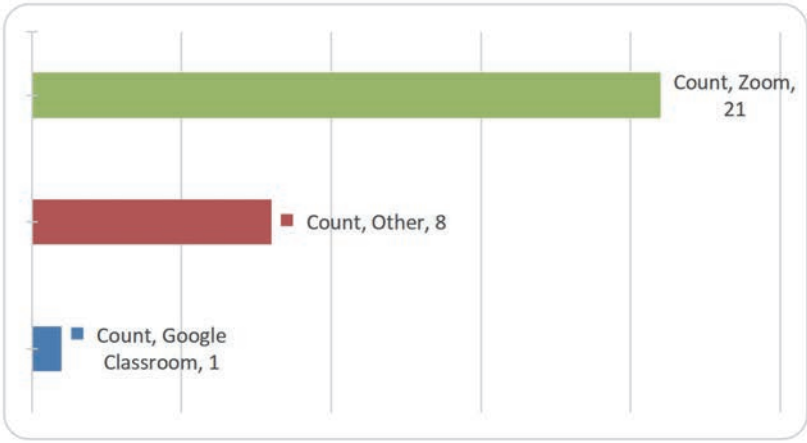

Figure 12: Tools reported to be used by the Turkish Respondents

6.1.10 Access to any of the following equipment BEFORE the pandemic

7 pupils have access to all of the equipments such as desktop, laptop, tablet and mobile phone in Turkey.

In addition, one pupil had access to smart TV (instead of desktop). Five pupils had access to none of these equipment. The others had access to at least one of these equipment.

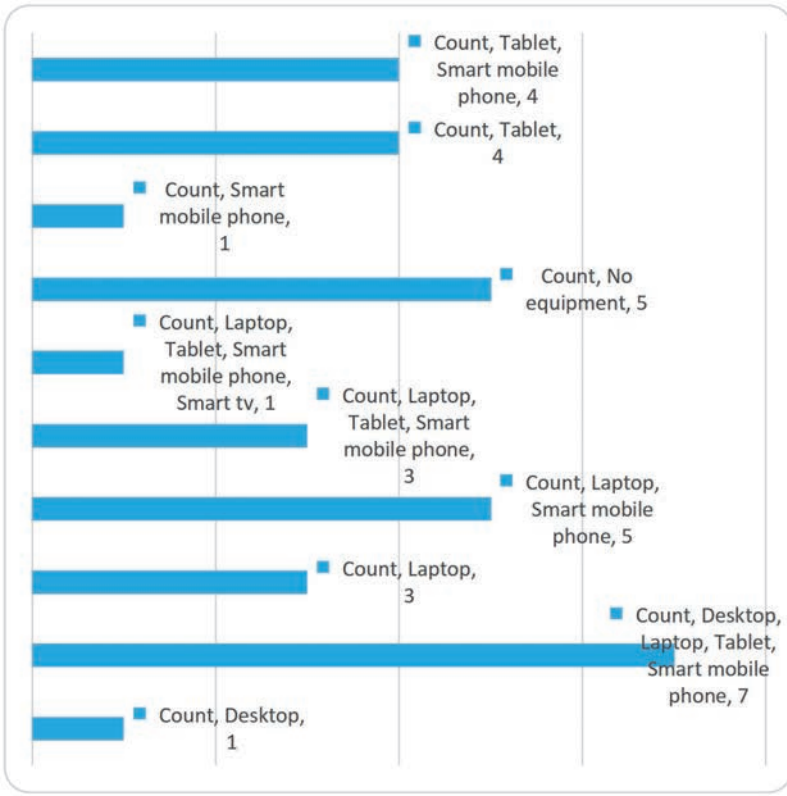

Figure 13: Access to digital equipment in Turkey before the pandemic

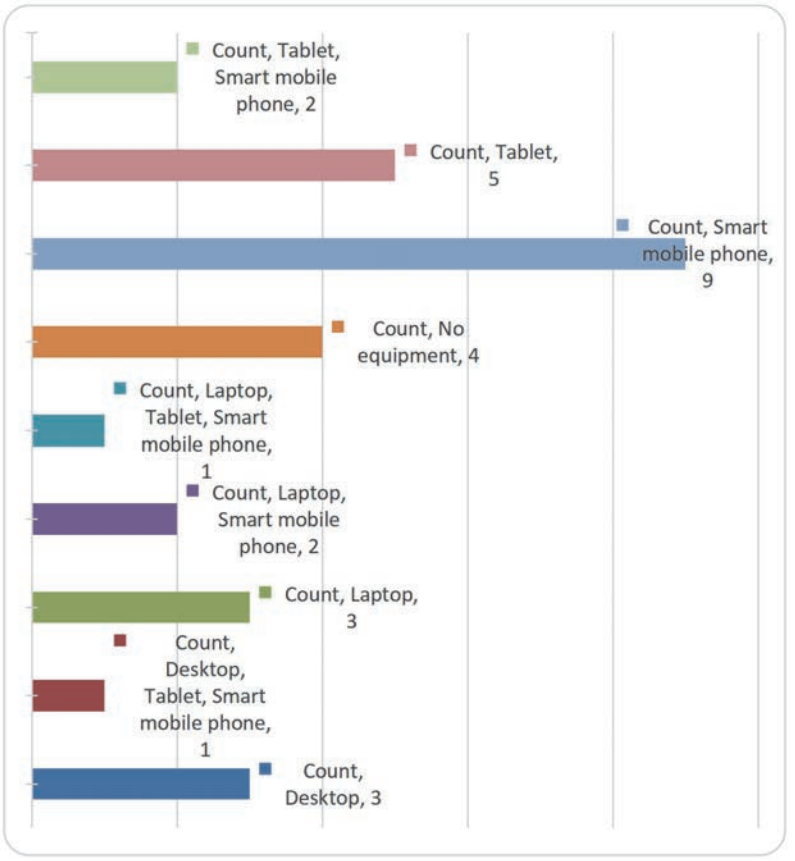

Figure 14: Access to digital equipment in Greece before the pandemic

While in Greece the number of pupils who had access to desktops/laptops is considerable; in Turkey, this is valid for the pupils who had access to a smart mobile phone. Five pupils reported to have access to a tablet. The number of pupils who had no access to equipment at all are almost the same in both countries.

6.1.11 Upgrade of any equipment later on DURING the pandemic

In Greece, 13 pupils acquired new equipment, while 7 pupils updated their existing equipment, the remaining 14 pupils noted no change.

These results are in line with an expected need of additional technical capacities and capabilities in order to address the requirements of online communication and education (See Figure 15).

Figure 15: Situation of respondents from Greece who acquired or upgraded on later on during the pandemic.

In Turkey, 16 of the pupils acquired new equipment. The number of the pupils who reported to have no change was 10. The number of pupils who upgraded existing equipment is lower when compared with Greece.

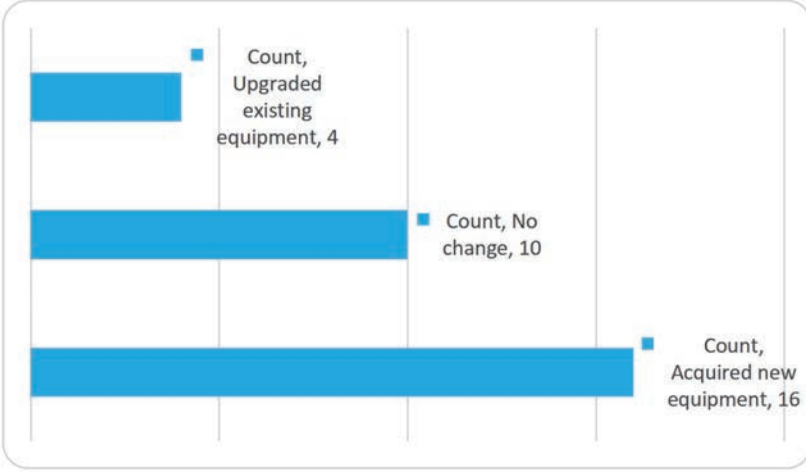

Figure 16: Situation of respondents from Turkey who acquired or upgraded on later on during the pandemic.

6.1.12 In case of need for upgrade who provided the equipment:

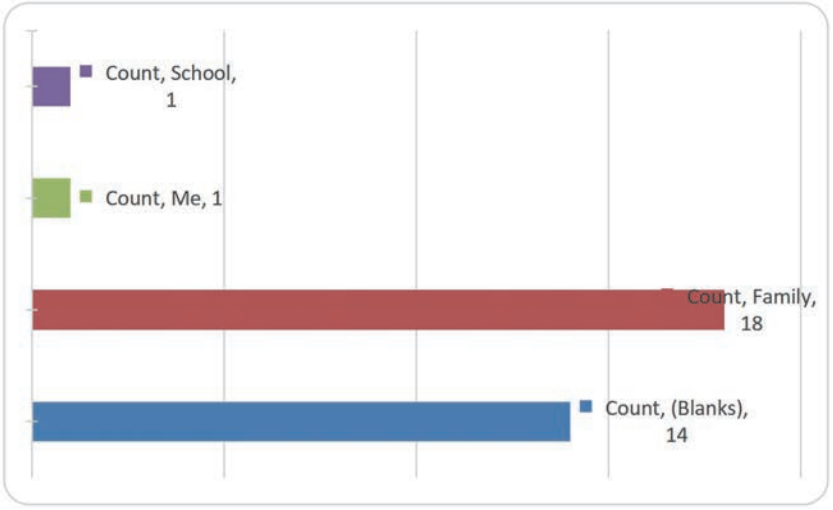

Figure 17: Who provided support for upgrades in Greece.

The newly acquired or updated equipments were mostly provided by the pupils' family (18 responses among the given 20 respondents) responses. This could be expected from the previous findings, which confirm that the families have stable economic conditions. In Greece, mainly parents seem to support the pupils to buy or update any equipment, which is in parallel with the results in Turkey (See Figure 18). In both countries, the number of pupils who were supported from school is only 1. While in Greece no pupil seemed to get support from local authority, in Turkey 7 pupils upgraded or acquired equipment with the local support, which demonstrated the role of government in supporting pupils.

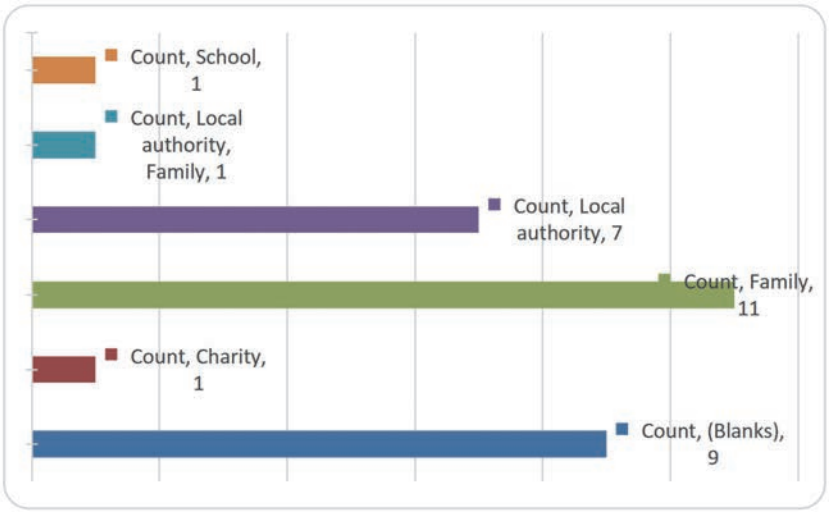

Figure 18: Who provided support for upgrades in Turkey.

6.1.13 Other methods of communication and learning

If you had NO equipment and DID NOT acquire any equipment before or during the pandemic, what other methods of communication and learning did you have to use?

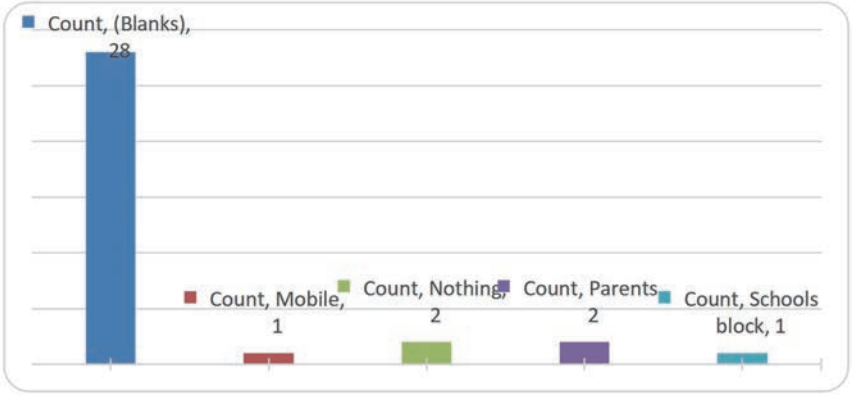

Figure 19: Other methods of communication and learning in Greece

Among the five pupils who had access to no equipment before (F3) or during the pandemic, three reported other methods for communication and learning.

Two pupils answered “nothing”, as an indication of troublesome conditions against distance education. 28 pupils did not respond this question (Figure 17). Similarly in Turkey, 27 pupils did not respond to this question (See Figure 18.)

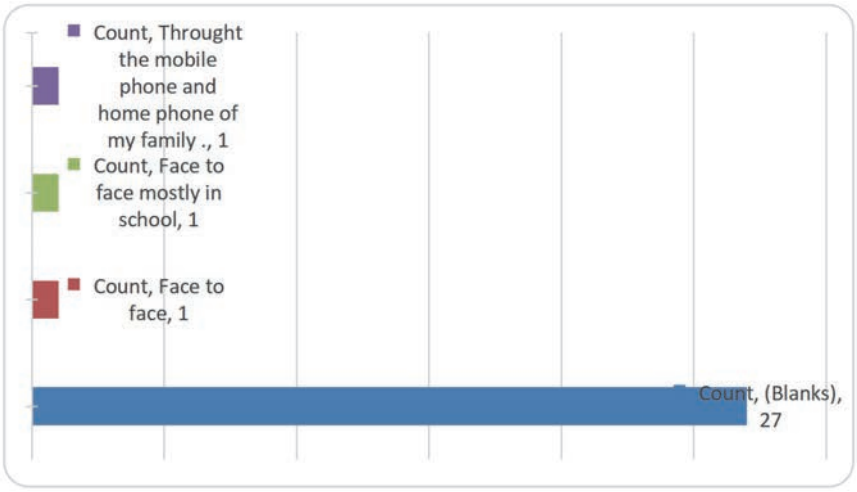

Figure 20: Distribution of participants from Turkey

6.1.14. Members of family that shared the same equipment

F5. Please select with how many members of your family (e.g. your brothers / sisters / parents / carers) you had to share the equipment with?

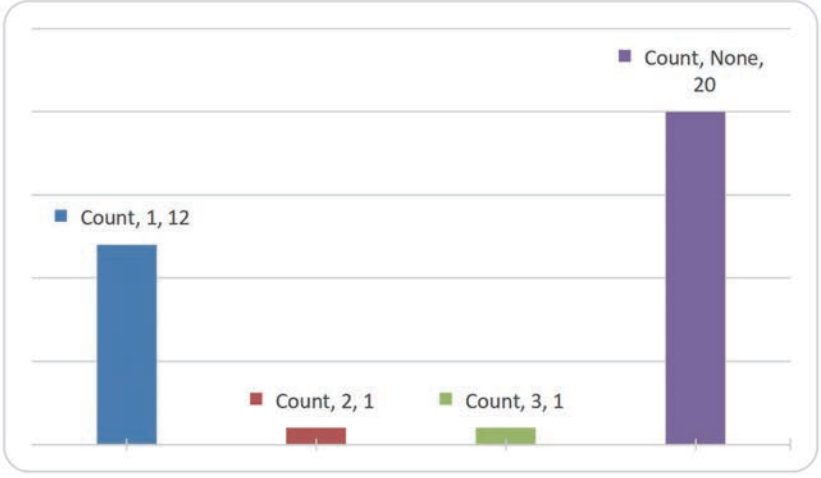

Figure 21: Number of the pupils who reported to share their equipment with other members of the family (brothers/sisters/parents/carers) in Greece.

In Greece, 20 pupils did not have to share their equipment with others, while 12 of them had to share with one other, and 2 with more than one other. It is expected that those being shared to be pupils' siblings, based on previous findings on the related question.

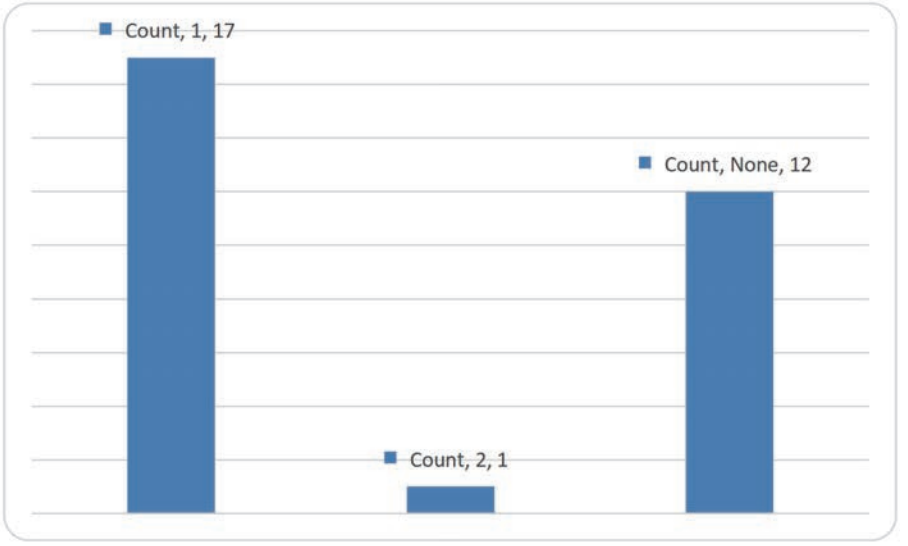

Figure 22: Number of the pupils who reported to share their equipment with other members of family (brothers/sisters/parents/carers) in Turkey.

In Turkey, the number of the pupils who did have to share their equipment is lower when compared with Greece. The ones who shared with at least one member of family were more than the number of participants in Greece.

6.1.15 Degree of help with equipment from family

To what degree was your family able to help you overcome difficulties in using the equipment?

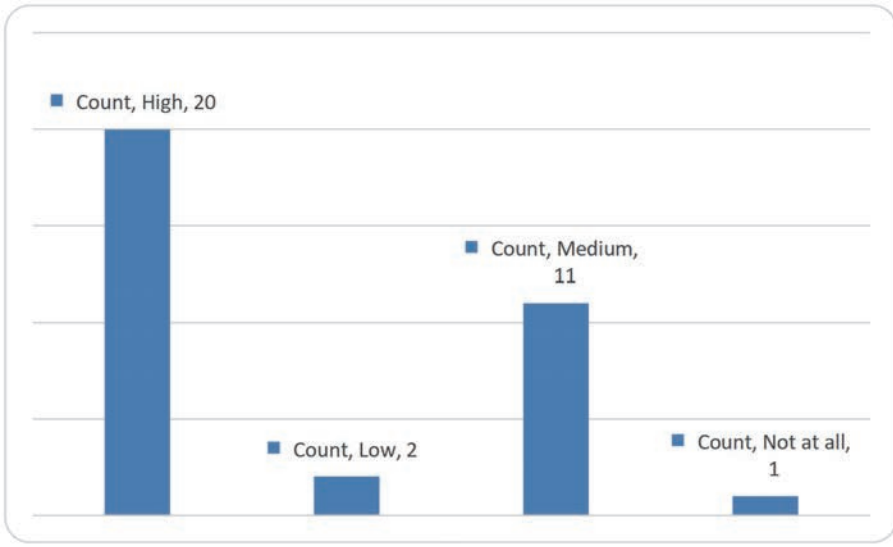

Figure 23: Degree of help with equipment from family in Greece

In total 20 of the Greek pupils confirm that they received high degree of help from their parents to overcome the difficulties in using the equipment. 10 pupils also confirm medium degree and 2 pupils low degree of help respectively. Only 1 pupil acknowledged no help. It seems that learning from home comes up with its own specific challenges, which are addressed by support from home. (See Figure 21).

The results seem to be the similar for the Turkish respondents. In both countries, it is seen that pupils get and feel the family support.

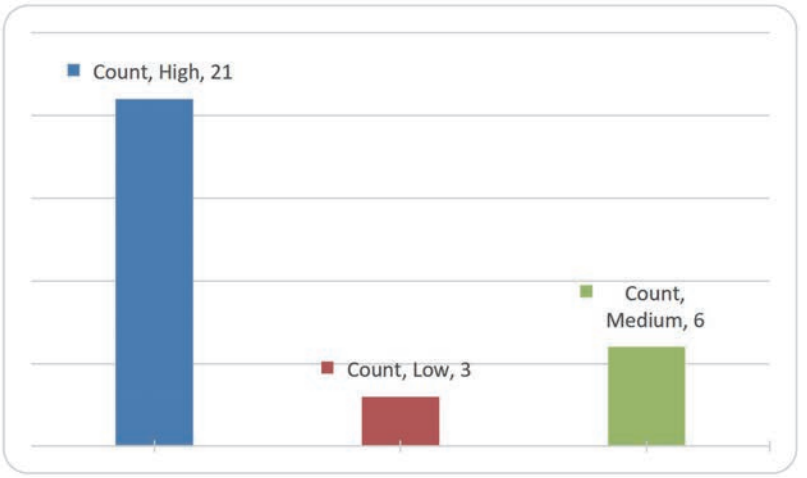

Figure 24: Degree of help with equipment from family in Turkey

6.1.16. Use of web-camera

How often did you use your web camera (video) during your online lessons?

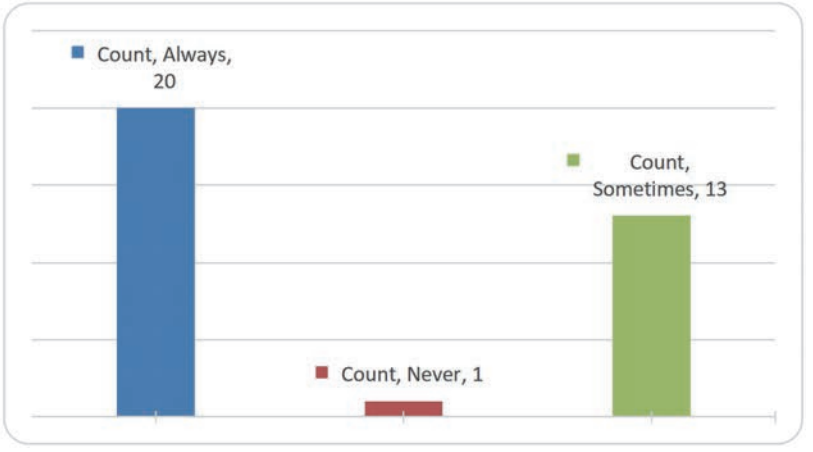

Figure 25: Greek respondents' use of web camera during online lessons.

20 pupils always used their web camera (video) during their online lessons. 13 s sometimes used their web camera (video) during their online lessons. Only 1 pupil did not use web camera at all. The common use of web camera is important as it could support a better environment for two-way communication and interaction between pupils and teachers.

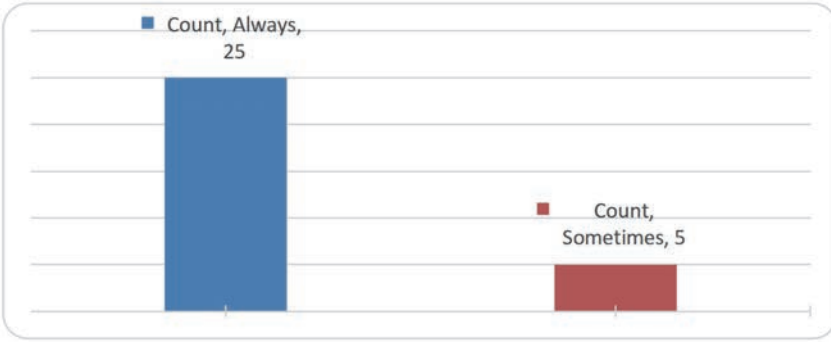

Figure 26: Turkish respondents' use of web camera during online lessons

25 pupils from Turkey reported to use their camera all the time. The number of pupils who sometimes used it is lower than those in Greece. Differences might be caused by the different implementations of the courses or expectations of the class teachers in each country.

6.1.17 Notes and exercises sent to pupils.

Did the teachers send you notes and exercises at home?

All the pupils from Greece confirm that their teachers sent them notes and exercises at home. It is understood that home works are common as part of distance education, supported by additional materials that complement online teaching sessions. As for Turkey, 21 of the respondents reported that their teachers sent notes and exercises at home. 9 of the pupils said no for this question. Some teachers might be implementing the exercises online during the class. The difference might have been caused by this.

6..1.18. Most difficult subjects to follow by distance learning

Which classes were the most difficult to follow from home DURING the pandemic?

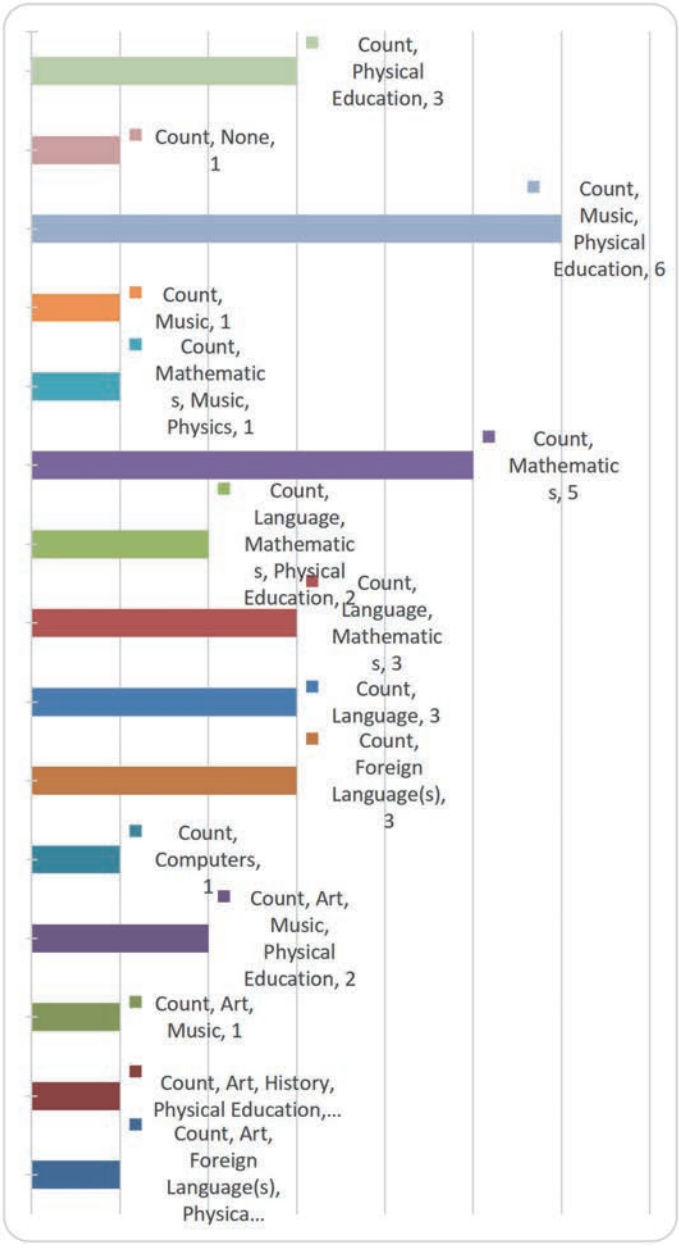

Figure 27: Subjects reported to be the most difficult to follow from home in Greece during the pandemic.

For 15 pupils physical education, for 11 pupils music, and for 11 pupils mathematics were chosen (separately or together with others) to be the most difficult classes to follow from home. While other classes were also reported to have moderate (for example art) or low (for example computers) difficulty, only 1 pupil reported difficulty from any class at all.

In Turkey, 16 pupils reported the highest challenge for language course. This is followed by 15 pupils who have chosen the Mathematics as the most difficult course during the pandemic. 5 pupils reported difficulty for physical education course. Among the least challenging courses, art is rated whereas history can be said to be in moderate level of difficulty for pupils.

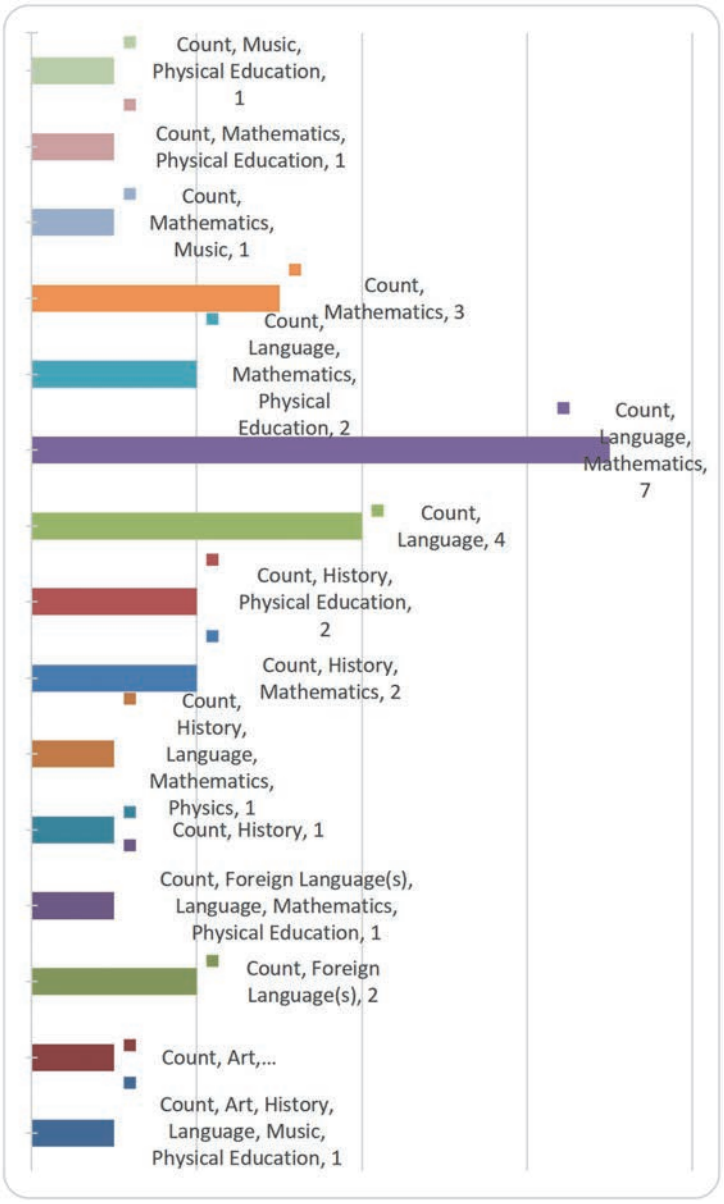

Figure 28: Classes Reported to be the Most Difficult to Follow from home in Turkey during the pandemic.

Who helped you the most when you had queries?

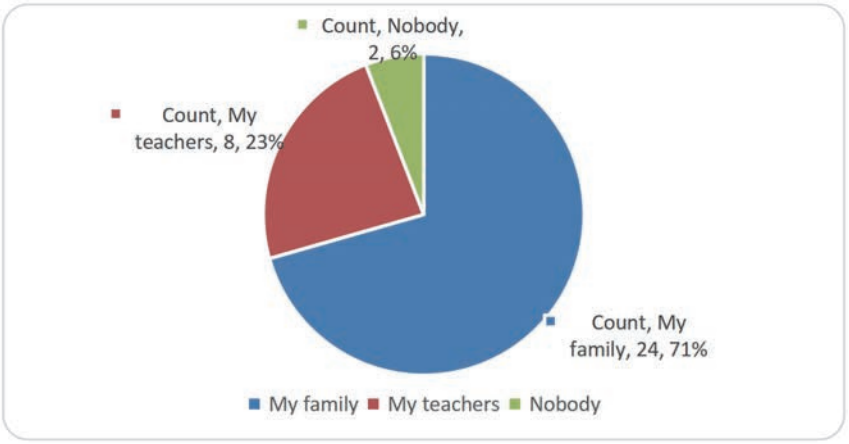

Figure 29: Who helped the respondents most when they have queries in Greece.

In Greece, 24 pupils acknowledged that their families and 8 pupils acknowledged that their teachers helped with their queries, while two pupils acknowledged help from nobody. It is also note-worthy that no help from friends were reported. These results are to be expected from a study environment at home distant from school. In Turkey, teacher and family support are very close to each other. Less pupils reported to get support from their friends.

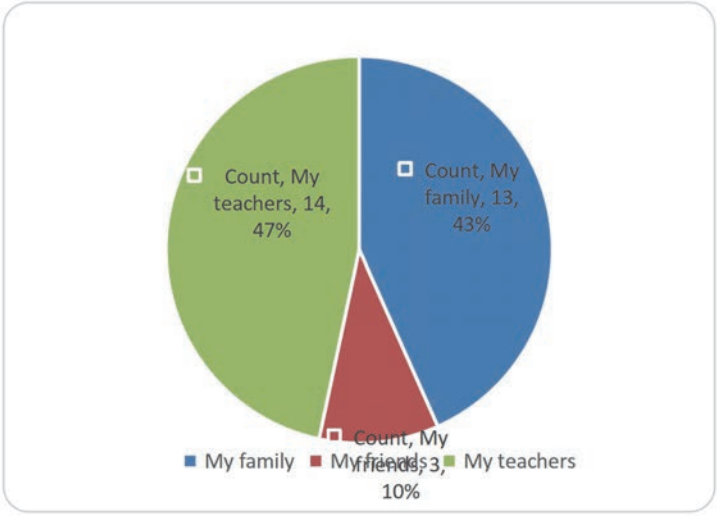

Figure 30: Who helped the respondents most when they have queries in Turkey.

6.1.19. Level of enjoyment of distance learning

Did you enjoy learning from home?

17 pupils answered that they did not enjoy the learning from home, while 11 acknowledged that it was OK for them. Three pupils answered that they hated it and enjoyed it very much as the most extreme answers on both sides. These common and extreme comments seem to be in accordance with the remaining part of the findings.

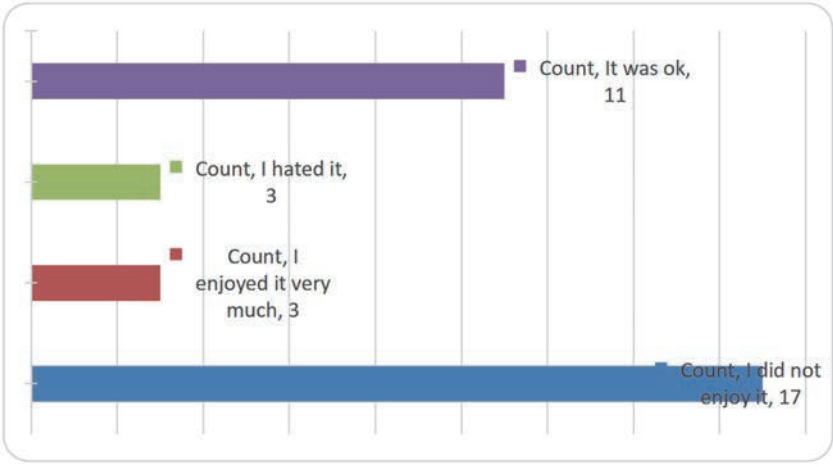

Figure 31: Enjoyment levels of the pupils during remote courses in Greece

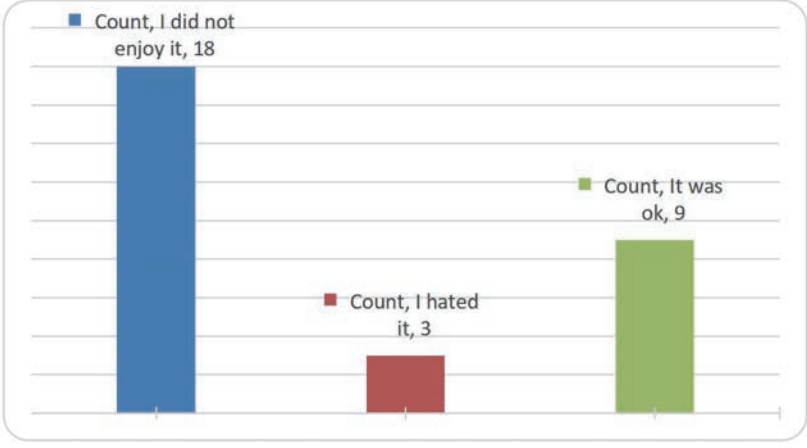

Figure 32: Enjoyment levels of the pupils during remote courses in Turkey

Likewise, the majority of the respondents from Turkey did not enjoy distance education and three of them said that they hated it. The results seemed to be similar in both Greece and Turkey.

6.1.20. Missing friends during pandemic.

How much did you miss you friends?

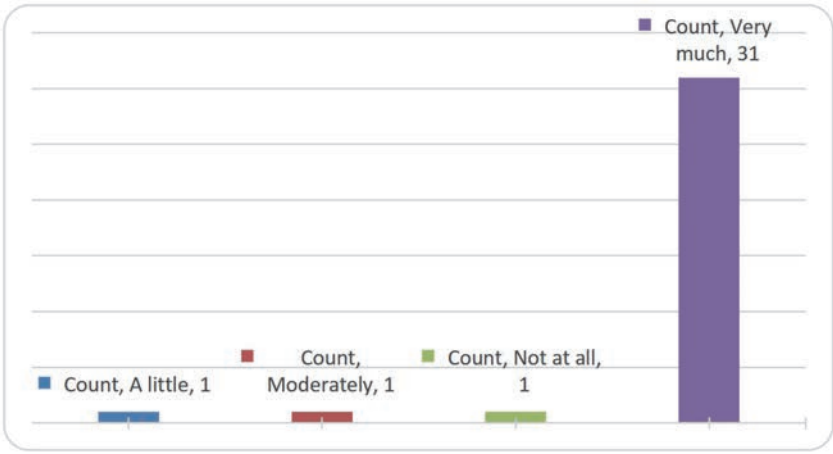

Figure 33: How much students missed their friends during the lockdown in Greece

31 of 34 pupils confirmed that they missed their friends very much. Only one missed his/her friends a little, one moderately one not at all respectively.

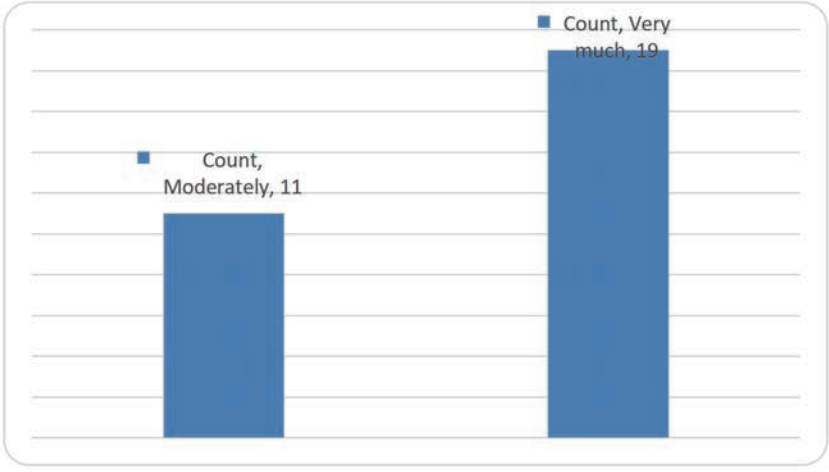

Figure 34: How much students missed their friends during the lockdown in in Turkey

In total 19 of 30 pupils missed their friends very much; however the remaining 11 stated that they moderately miss their friends.

6.1 21. Radio or TV lessons

Did you attend any lessons on TV or Radio?

Among Greek respondents, no lessons on radio were reported. It seems radio was not used as a means for education during pandemic. Totally six respondents reported that they attended lessons on TV. It can be inferred from these results that while there were certain educational opportunities available on TV, they were not commonly used by the responding Greek pupils. Among the Turkish respondents, no lessons were followed through the channel of radio.The result is the same as that of Greece. In Turkey more pupils (n=25) followed courses on TV. Education Information Network (EBA) channel was daily used by children in Turkey during the pandemic. The teachers played an important role to encourage children to watch the EBA channel, which was considered as complementary support to the pupils.5.11.21 Frequency of connection to school friends during the pandemic

How frequently did you keep in touch with any of your school friends DURING the pandemic?

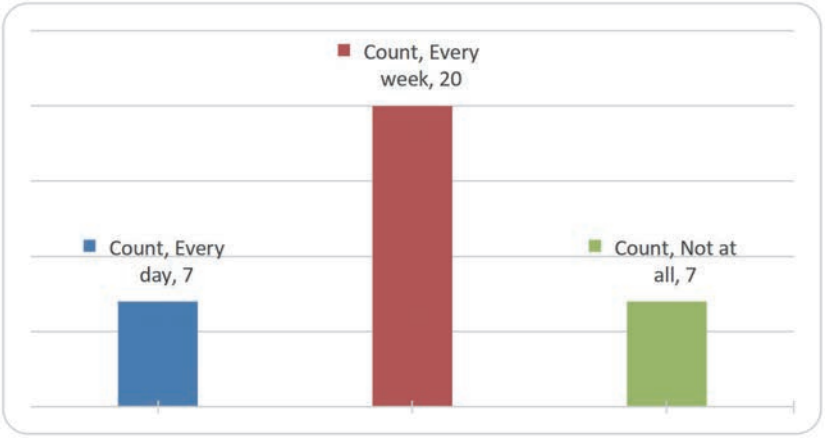

Figure 35:. Greek Pupils' frequency of keeping in touch with their school friends.

During the pandemic, 20 pupils weekly kept in touch with their school friends, while 7 pupils daily did so. 7 pupils did not keep at all contact with their school friends..

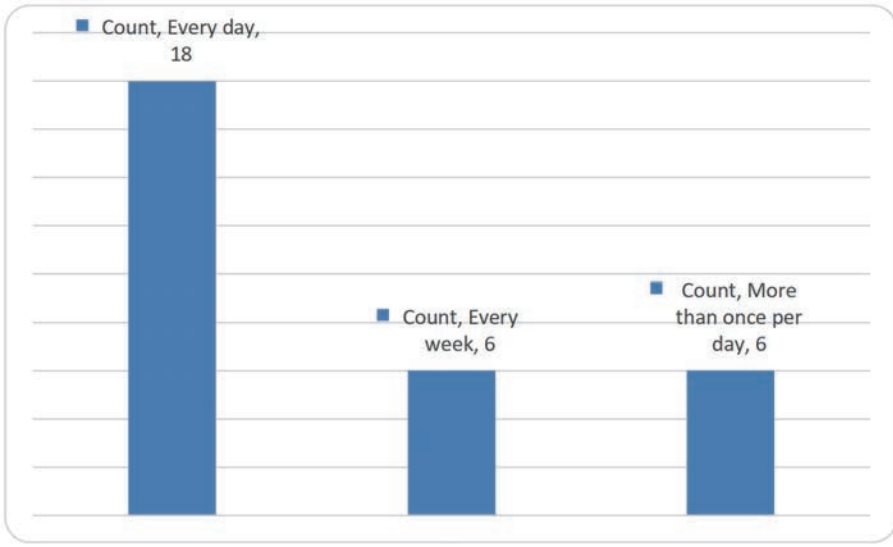

Figure 36: Turkish pupils' frequency of keeping in touch with their school friends.

Among Turkish pupils during the pandemic, 24 pupils reported to contact their friends more often. There was no respondent who claimed to have no contact with their school friends. The results indicate that the pupils need social dialogue and they want to keep in touch with their classmates to get socialized and relieve pandemic-related stress.

6.1.22 Looking forward to school opening

How much are you looking forward to your school opening after the pandemic?

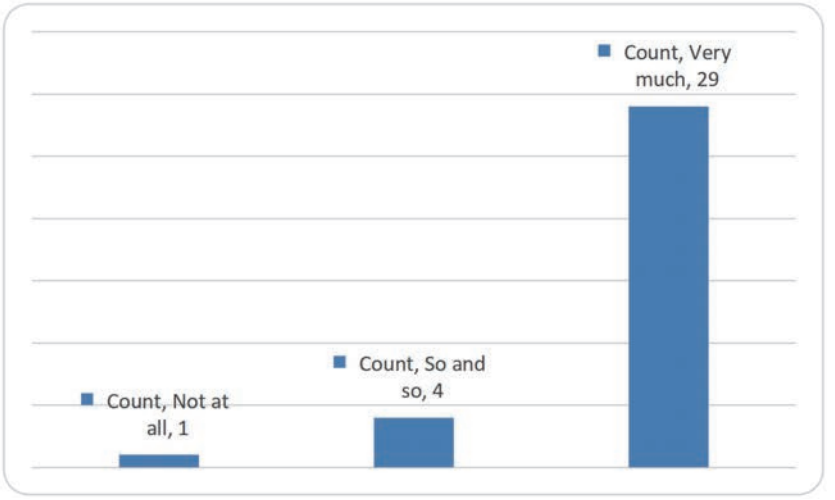

Figure 37: Distributions of the participants who are looking forward to opening of the school after the pandemic in Greece.

In total 29 of 34 pupils very much looked forward to their school opening after the pandemic. These results confirm that distance education is seen as temporarily and the pupils prefer studying at school to studying at home.There seem to be, however, one outlier who enjoys distance education more than anything else, and do not want schools to reopen.

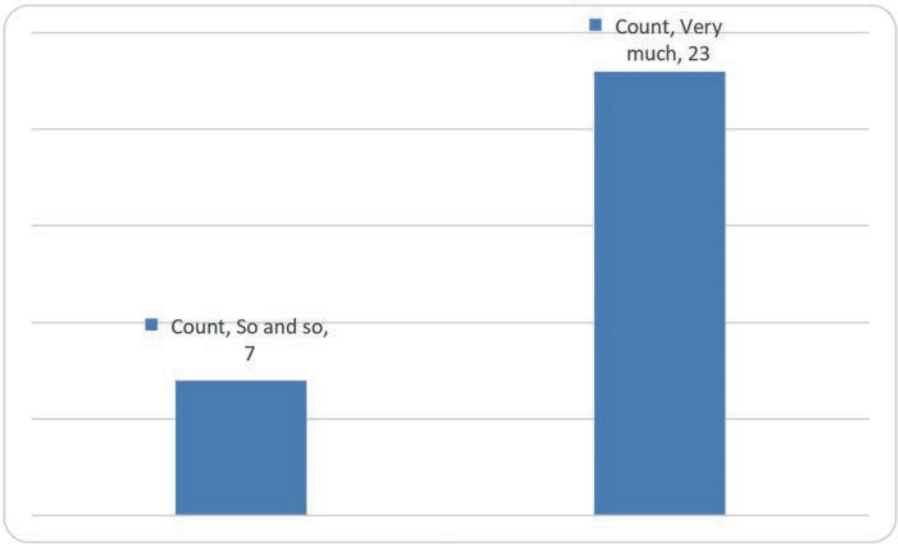

Figure 38: Distributions of the pupils who are looking forward to opening of the school after the pandemic in Turkey.

In Turkey in the majority of pupils look very much forward to the opening of schools (23/30), while seven pupils do not really mind.

6.1.23 How students learn best

How much do you agree with the following statements?

Among 34 pupils from Greece, 32 of the pupils and among 30 pupils from Turkey, 26 of them disagreed with the fact that they learnt better home. They did not find studying at home efficient and appropriate for their learning process. This might be caused by the lack of effective communication with their teachers or friends. Also lack of physical contact or eye contact was lost in distance education. The challenges of distance education might have affected the psychology of children in a negative way in both countries.

I learnt better from/at home

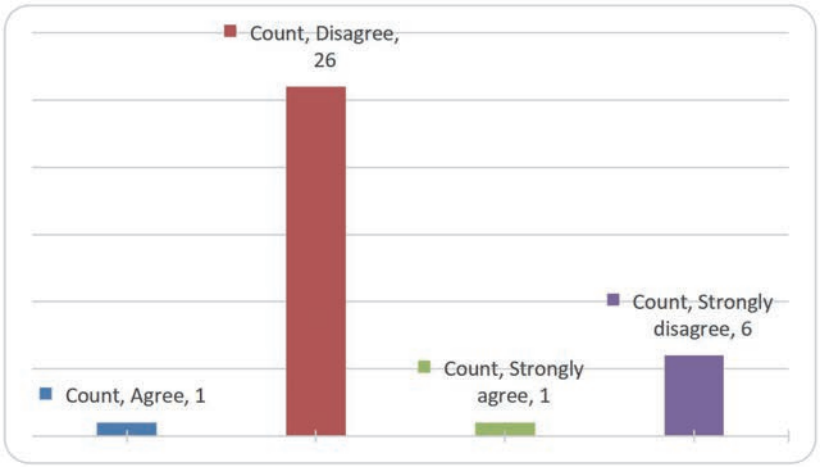

Figure 39: Learning better from home in Greece

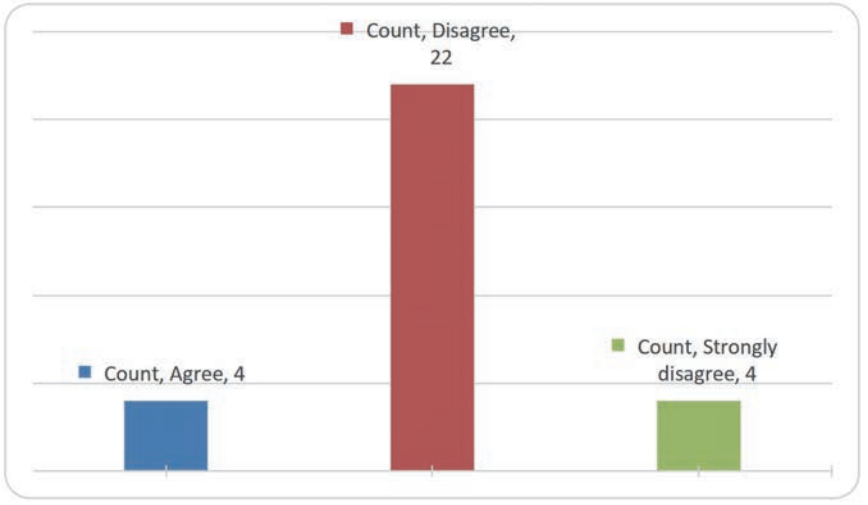

Figure 40: Learning better from home in Turkey

6.1.24 Difficulty in following online classes It was difficult for me to follow online classes

It has been observed that the majority of the Greek and the Turkish pupils found it difficulty to follow online courses. This data harmonise with the responses of the previous statement, which are both complementary to each other. It can be inferred that pupils do not find distance education process fruitful and efficient. Their learning process and progress might have been slowed down.

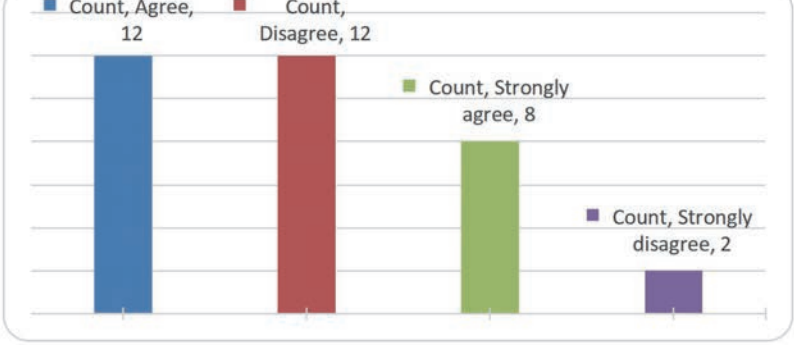

Figure 41: It was difficult to follow online classes in Greece

Due to this reason, their manner towards distance education was found out to be quite negative (See Figure 41 and 42).

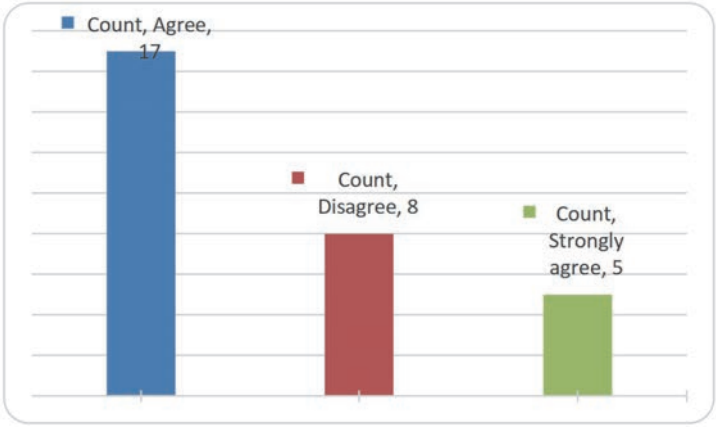

Figure 42: It was difficult to follow online classes in Turkey.

In total 15 of the Greek pupils reported that science and mathematics classes should not be taught online. However, when figure 43 was examined, it was seen that more than half of the Greek pupils found online Mathematics courses efficient. In Turkey, the results are quite different. Except 2 pupils, the other pupils do not prefer to be taught science and mathematics online.

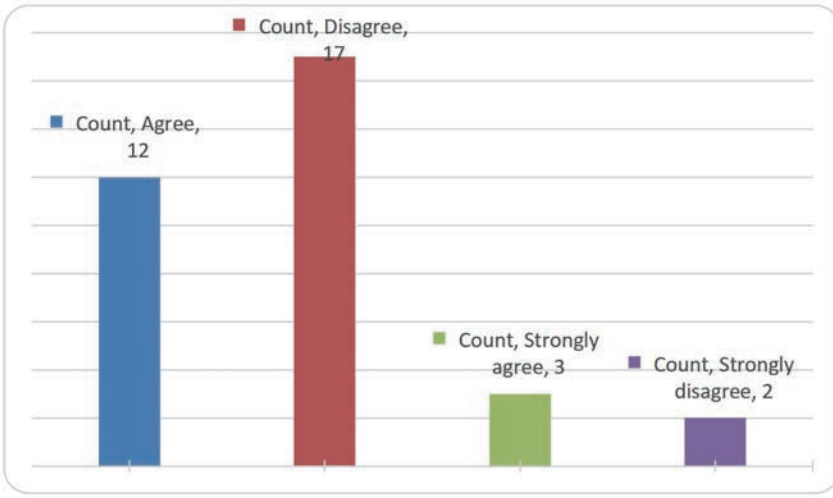

Figure 43:Should Science and Mathematical subjects be taught online in Greece

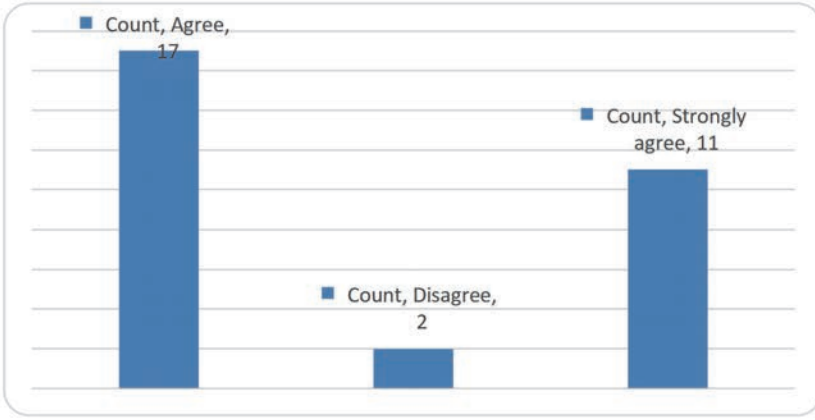

Figure 44: Should Science and Mathematical subjects be taught online in Turkey

6.1.25 .Better learning in school atmosphere

I learn better in the school atmosphere

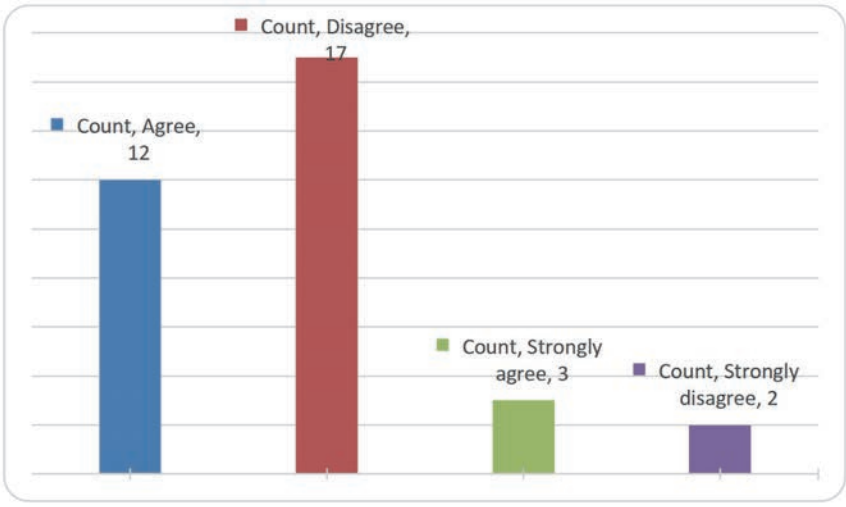

Figure 45**:** I learn better in the school atmosphere in Greece

Fifteen (15) of the pupils from Greece state that they learn better in the school atmosphere. According to the other findings of the study, more pupils were expected to agree with the statement.

Figure 46: I learn better in the school atmosphere in Turkey

According to Figure 44, among 30, 22 of the pupils agreed with the given statement. There are still some pupils who think that they learn better in the distance education courses.

6.1.26 Difficulty of asking questions in online classes. Is it more difficult to ask questions in online classes?

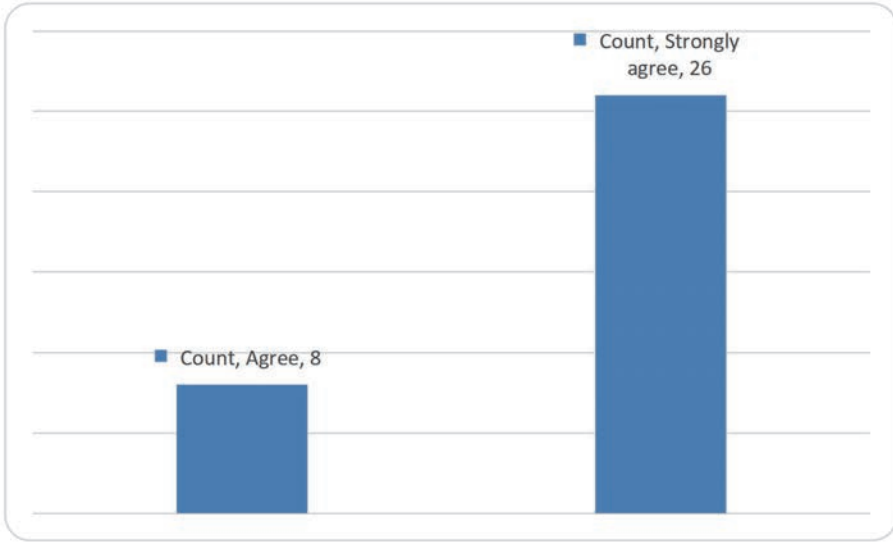

Figure 47: More difficult to ask questions online in Greece

26 pupils from Greece and 17 pupils from Turkey found it extremely difficult to ask questions online. Findings from Turkish respondents are similar, with the difference that instead of strongly agreeing they mainly agree. It is surprising that even though the rate of Greek pupils who think that learning in school environment is better is lower than in Turkey, the majority of the Greek respondents (when compared with Turkey) find it particularly difficult to ask questions in online classes.

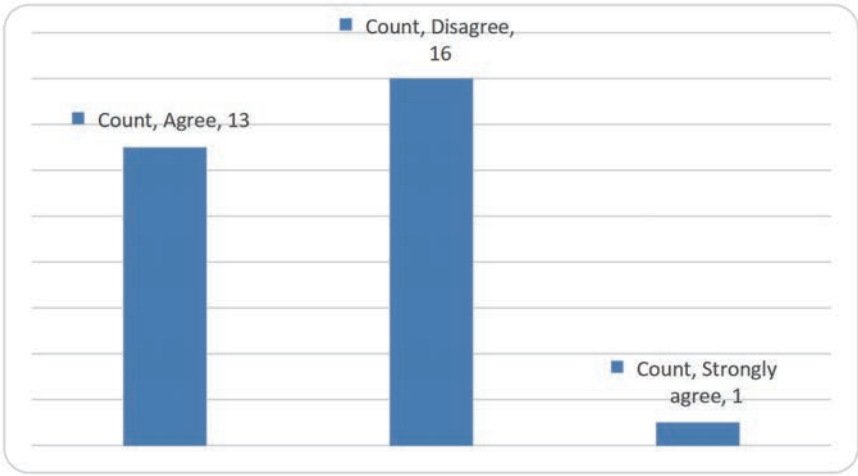

Figure 48: More difficult to ask questions online in Turkey

6.1.27 Difficulty in following homework announcements

Is it difficult to follow the announcements about homework

While 20 pupils from Greece found it difficult to follow the announcements about homework, 14 pupils from Turkey found it difficult. It is surprising result that 16 Turkish Respondents did not find it difficult.

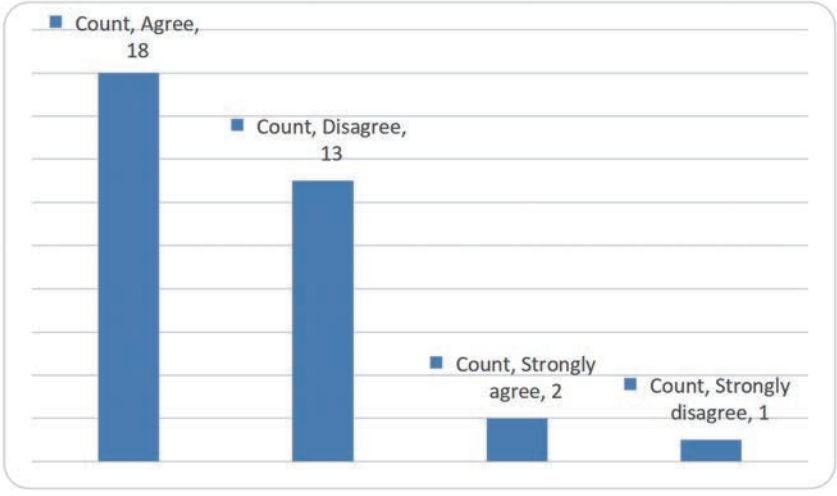

Figure 49: Difficulty in following homework announcements in Greece

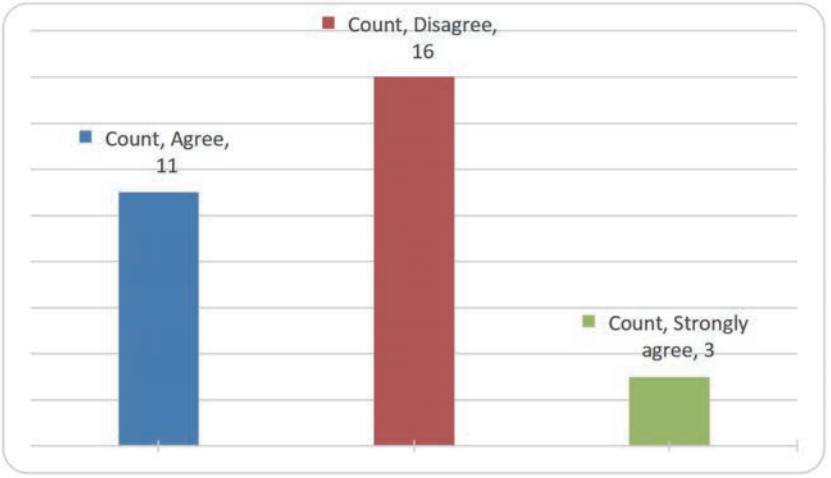

Figure 50: Difficulty in following homework announcements in Turkey

6.1.28 Like most about online learning during the pandemic

What did you LIKE the most about online learning DURING the pandemic.

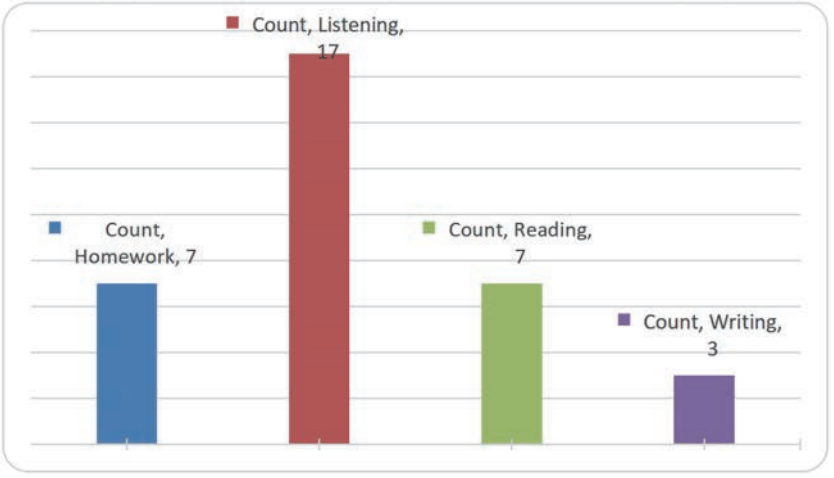

Figure 51: What pupils liked most about distance courses during pandemic in Greece

In Greece the majority of the pupils liked listening most. This is followed by reading and homework. Among Turkish respondents, listening is in the top rank, as well. However, it is quite strange that pupils did not vote for homework.

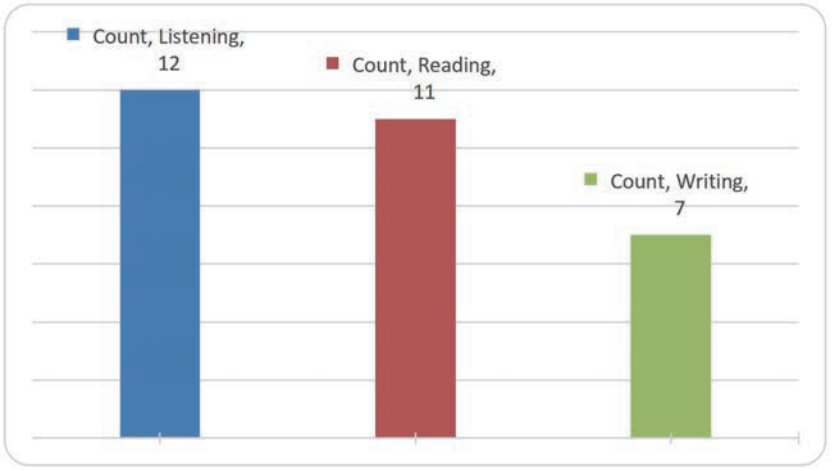

Figure 52: What pupils liked most about distance courses during pandemic in Turkey

6.1.29 Hate most about online learning during the pandemic.

What did you HATE the most about online learning DURING the pandemic.

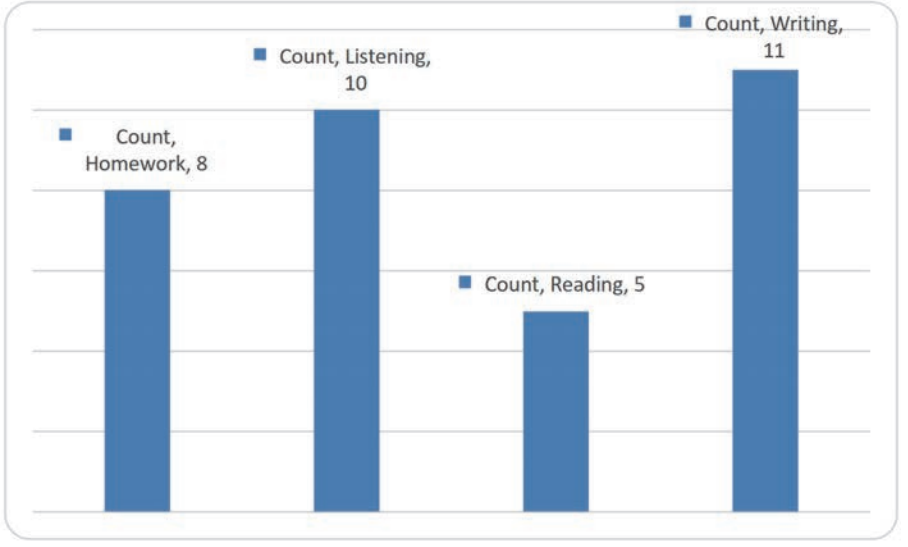

Figure 53: HATE the most about online learning DURING the pandemic in Greece

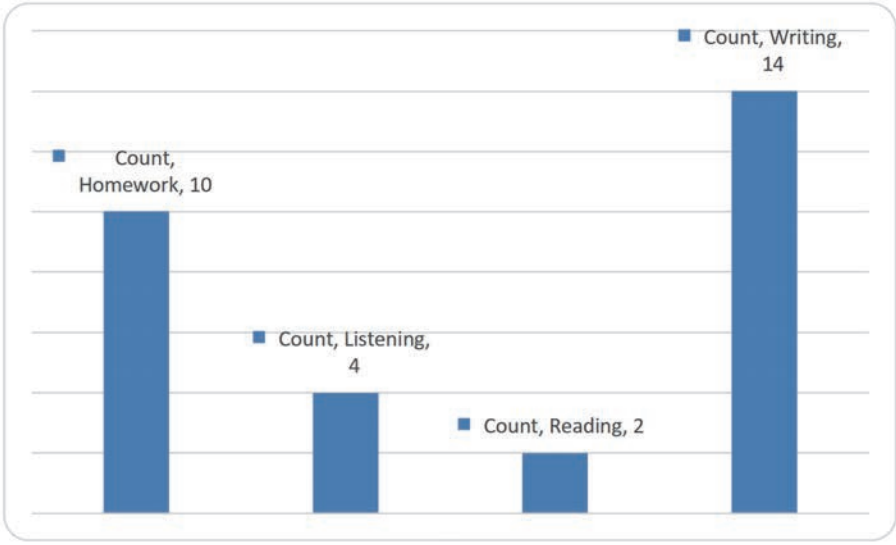

Figure 54: HATE the most about online learning DURING the pandemic Turkey

7. Greece and Turkey: Comparing and Contrasting Primary Education Outcomes

The results of this study revealed some clear similarities and some differences between the Greek and the Turkish (mostly 7-8 years old) pupils' experiences on studying and learning on online distance mode.

7.1. Key Differences

The main key differences between the Greek pupils and the Turkish pupils found from their answers to the following issues: *Equipment(s) and tool(s) for online learning, difficulties in online learning*, and *support for online learning*.

The Greek pupils seem to have a higher level of equipment, readiness for online studying and learning than the Turkish pupils. That is, before the pandemic, all Greek pupils had access to the Internet at home while that was not the case for many Turkish pupils. Also, some Greek pupils had access to all types of equipment (desktop, laptop, tablet, and smart phone) but that option was very rare for the Turkish pupils. However, the majority of both the Greek and the Turkish pupils had access at least for one equipment, yet, the Greek pupils had access mostly to tablet while the Turkish pupils had access to smart phones. An explanation for that

might be that the tablet had been thought to be more suitable for 7-8 years old pupils in Greece. It is possible that online studying and learning could be more fun and with more pleasure when the person does not have to share the equipment with other family members. That is, when a person feels a need to study and learn, she/he does not have to think about, for example, when the equipment is available and/or for how long can I use it now. From this perspective, the Greek pupils were in a better position than the Turkish pupils. That is, the majority of the Greek pupils do not have to share the equipment with other family members, while more than half of the Turkish pupils had to share the equipment. This might create the need to build a timetable and schedule for the usage of the available equipment.

In order to manage to participate in online studying and learning, many Greek and Turkish families needed to upgrade the existing equipment. Half of them purchased/got new equipment and a few of them updated the existing one. However, half of the Greek pupils' families did not make any changes regarding their equipment upgrades, while one third of the Turkish pupils' families proceeded to no changes at all for the already existing equipment.

Yet, when the equipment's upgrading was needed, there was a difference found among the two countries in regard with whose responsibility this was. More specifically, the particular upgrade was mostly under the families' responsibility in Greece, but in Turkey the authorities also participated in upgrading the equipment for pupils. Notably, the new or/and updated equipment was difficult to be used by both the Greek pupils and the Turkish pupils. Apparently, for this reason, in Greece and in Turkey their families helped the pupils a lot in order to overcome the usage challenges.

Table 1: Access to Internet and relevant equipment before *COVID-19*

Internet at home before	All (34) have access	18 out of 30 have access
Access to equipment before	To all equipments 7	To all equipments 1
	To none equipments 5	To none equipments 4
	To at least one equipment 22	To at least one equipment 25
	Mostly tablet (4)	Mostly smart phone (9)

Table 2: Status of sharing same equipment with family members

Sharing same equipment with family members	With nobody 20	With nobody 12
	With one 12	With one 17
	With two 1	With two 1
	With three 1	

Table 3: The source of the provided and upgraded equipment

Who provided and upgraded equipment	Family 18	Family 11
	School 1	Authority 7
	Oneself 1	School 1
		Charity 1(2)

Table 4: Upgrading equipment during pandemic

There were significant differences between the Greek pupils and the Turkish pupils concerning the actual online learning and studying classes.

From the tools perspective, the Greek pupils used mainly Microsoft Teams and WebEx, while the Turkish pupils used mainly Zoom.

In addition, the Turkish pupils used more actively the web camera during the online lessons than the Greek pupils. This might have been encouraged or even demanded by the teachers in Turkey. In one sense, the use of web camera creates a feeling of belonging. That is, a person sees other people's faces. On the other sense, the use of web camera is a convenient way to monitor that all the pupils are really participating or, at least, are present.

The radio as a learning and studying tool was not used in either the Greek pupils or the Turkish pupils. In Turkey, there were no offered courses on Radio. However, attending TV lessons were very common among the Turkish pupils and it was encouraged by the teachers. This was not the case in Greece, since only a few Greek pupils attended TV lessons. In Turkey, there might be a long tradition for sending learning material by TV for pupils.

Table 5: Tools used in distance education process

Tools used for online classes	Microsoft teams 16	Zoom 21
	Web ex 16	Other 8
	Zoom 2	Google classroom 1

Table 6: Status of using web camera

Use of web camera (how often use video during online lessons)	Always 20	Always 25
	Sometimes 13	Sometimes 5
	Never 1	

Table 7: Attendance to Radio or TV Lessons

Radio or TV lessons (attend)	No radio 34	No radio 30
	Yes TV 6	Yes TV 25
		(Education Information Network (EBA) channel)

Online learning and studying may have specific challenges and difficulties. In terms of the difficulties found in online taught subjects, the Greek pupils had most difficulties in physical education, music and mathematics, while the Turkish pupils seem to have mostly struggled with language, mathematics, and physical education.

Interestingly, almost all the Turkish pupils supported the idea that science and mathematics should be taught online, even though mathematics, in particular, caused difficulties for them. However, just half of the Greek pupils supported this idea (!).

From the *question asking* perspective, all the Greek pupils had difficulties in asking questions during online classes, while just half of the Turkish pupils had experienced the same difficulty. This is very interesting since question asking is one of the most important elements of learning and studying. This is clearly one issue that must be studied further. That is, why pupils feel that it is difficult to ask questions during online learning and studying lessons?

From the helping and support perspective, for the Greek pupils the most important resource of help came from the family, while for the Turkish pupils it is the teacher the one who helps most. Interestingly, none of the Greek pupils mentioned the friends/school friends, and only a few from the Turkish pupils named friends/school friends as a resource for support or help.

Table 8: Most difficult subjects in distance learning

Most difficult subjects to follow by distance learning	Physical education 15	Language 16
	Music 11	Mathematics 15
	Mathematics 11	Physical education 5
	All subjects 1	

Table 9: Should science and mathematics be taught online

Should science and mathematics be taught online	Strongly agree 3	Strongly agree 11
	Agree 12	Agree 17
	Disagree 17	Disagree 2
	Strongly disagree 2	Strongly disagree 0

Table 10: Difficulty in asking questions in online classes

Difficulty in asking questions online classes	Strongly agree 26	Strongly agree 1
	Agree 8	Agree 13
	Disagree 0	Disagree 16
	Strongly disagree 0	Strongly disagree 0

Table 11: Who helps pupils when they have queries

Who helps pupils when they have queries	Family 24	Teacher 14
	Teacher 8	Family 13
	Nobody 2	Friends 3

As can be seen from the numbers in Table 12, clearly the Turkish pupils preferred to or thought that they learn better at school than at home. Surprisingly, the Greek pupils' experiences on where to learn better was not clearly reported.

Table 12: The fact that they learn better at school

Learn better at school	Strongly agree 3	Strongly agree 4
	Agree 12	Agree 18
	Disagree 17	Disagree 7
	Strongly disagree 2	Strongly disagree 1

7.2. Key Similarities

The main similarities between the Greek pupils and the Turkish pupils of primary schools were found in regard with the following issues: *Dislike and difficulties in online learning, likes in online learning, missing school and friends, keeping in touch with school friends, equipment upgrade and need of help,* and *where to learn the best*.

The majority of both Greek and Turkish pupils *did not enjoy* the distance online learning and studying. Both groups had difficulties in following their online lessons, while the majority of the Greek pupils and half of the Turkish pupils had additional difficulties in following the homework announcements.

Obviously online learning and studying require different skill sets than the face-to-face approach. It takes time to adapt to a new system. Also sitting down, concentrating, and staring for a relatively long time at the screen might be a rather demanding task for this age group. Further, both the Greek pupils and the Turkish pupils did not like writing tasks as well as homework. Both the Greek pupils and the Turkish pupils also liked listening and reading tasks.

The clear majority of the Greek pupils and the Turkish pupils did not support the idea that they would learn best at home. On the contrary, the clear majority of both of them were really looking forward to going back to school again, with one (rare) exception from Greece.

Almost all the Greek pupils were missing their friends/school friends a lot, with a few exceptions. While the Turkish pupils were missing a lot (or moderately) their friends/school friends both the Greek pupils and the Turkish pupils had kept in touch with their friends or school friends. Notwithstanding, the majority of the Greek pupils kept in touch on a weekly basis, but the majority of the Turkish pupils kept in touch on a daily base. This might explain why the Greek pupils were missing their friends/school friends (a little bit) more than the Turkish pupils.

Table 13: Feelings towards online classes

Enjoyment of distance learning	No 17	No 18
	Ok 11	Ok 9
	Hated 3	Hated 3
	Enjoy very much 3	
Difficulty in following online classes	Strongly agree 8	Strongly agree 5
	Agree 12	Agree 17
	Disagree 12	Disagree 8
	Strongly disagree 2	Strongly disagree 0
Difficulty in following the announcements about homework	Strongly agree 2	Strongly agree 3
	Agree 18	Agree 11
	Disagree 13	Disagree 16
	Strongly disagree 1	Strongly disagree 0
Hate most about online learning	Writing 11	Writing 14
	Listening 10	Homework 10
	Homework 8	Listening 4
	Reading 5	Reading 2
Like most about online learning	Listening 17	Listening 12
	Reading 7	Reading 11
	Homework 7	Writing 7
	Writing 3	

Table 14: How pupils learn best

How pupils learn the best	Strongly agree 1	
(learn better at home)	Agree 1	Agree 4
	Disagree 26	Disagree 22
	Strongly disagree 6	Strongly disagree 4

Table 15: Emotions about school opening and missing friends

Looking forward to school opening	Very much 29	Very much 23
	So and so 4	So and so 7
	Not at all 1	
Missing friends	Very much 31	Very much 19
	Moderately 1	Moderately 11
	Little 1	
	No at all 1	

Table 16: Connection to School friends

Connection to school friends	Every week 20	Every day 18
(keeping in touch)	Every day 7	Every week 6
	Not at all 7	More than once per day 6

Table 17: Upgrading equipment during pandemic

Upgrade equipment during pandemic	New equipment 13 Update existing equipment 7 No changes 14	New equipment 16 Update existing equipment 4 No changes 10

Table 18: Help with equipment from family

Help with equipment from family (overcome the difficulties of using it)	High 20 Medium 11 Low 2 Not at all 1	High 21 Medium 6 Low 3

Table 19: Other methods of communication and learning

Other methods of communication and learning (when no equipments)	Nothing 2 Parents 2 School blocks 1 Mobile 1	Home phone 1 Face to face at school 1 Face to face 1

Table 20: The fact that whether notes and exercises are sent to pupils by teachers

Notes and exercises sent to pupils by teachers at home	Yes 34	Yes 21 No 9

8.Limitations

All pupils who responded from both Greece and Turkey come from Ankara or from Thessaloniki which are major cities. For example availability and accessibility to broadband may not be available or reliable in the regions especially in villages.

The completion of the questionnaire was totally voluntary and, thus, it was not possible to ensure that all pupils engaged in the exercise. In addition to Greece and Turkey the questionnaire had been distributed to several other countries including Cyprus, Spain and the UK. Cyprus delivered only four (4) responses which reported that their parents had not been unemployed either before or during the pandemic. They all had access to facilities and their parents were able to help them with their online studying. These numbers were not included in the comparison because the results would be skewed.

It was decided to leave out from the questionnaire the aspects of online safety and cybersecurity because it was thought that the pupils might not understand questions regarding the aspects of online privacy and cyberprotection well. In addition a surprising finding was the use of the camera in both countries but more pupils were using video-camera in Turkey. Thus their online privacy could have been violated.

Hence the lack of questions about security and privacy information is a severe limitation of this survey because there is an increased number of incidents online in these age groups of primary education that indicate the significance of the issue in schools and the importance of taking measures against invention to pupils' privacy. The basic knowledge and awareness of the prospective ICT teachers [9] and parents but the alertness of students themselves can become the most significant cyberprotection mechanism.

9.Conclusions

It is important to listen to pupils' voices because they reveal the feelings, emotions, difficulties, as viewed by them. The originality and contribution of this research is exactly that. Knowing the sociocultural and socio-technical differences of two neighbouring South-East Mediterranean countries we can draw conclusions for many (primary) education stakeholders that can be key-holders and progressive change agents for i) the educational continuous process improvement and ii) governmental national and regional policies for pupils and their families' well-being.

The participating pupils live in Ankara, Turkey and in Thessaloniki, Greece both major city centres. From their responses we cansee that they have more similarities than differences in the issues we asked them about and unfold their opinions.
Future online classes are a certainty so it is of paramount importance to be aware of the likes and dislikes of the learners of any age and take them into consideration for authoring and designing instructional curricula on cyberspace or/and cyberplace with the right protection mechanisms and cybersecurity considerations in mind.

10. Acknowledgments

The authors would like to express their thanks to all the teachers, parents and other family members who motivated their children to complete the online questionnaire.

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